

Class 1 Permit Modification Notifications

Update SW-846 and EPA Methods

**Revise Attachment H to Update the Organization Responsible for the List of
Personnel Assignments**

Revise Attachment H1 Regarding Job Title

Revise Two Facility Descriptions

Revise Language in Table B-5 to be Consistent with Permit Text

Remove Reference to Rail Shipments

Revise Reference to Table B3-3

**Update Underground and Surface Figures to be Consistent with Current
Configurations**

Revise Final Waste Volume for Panel 3

Update Emergency Coordinator List

**Waste Isolation Pilot Plant
Carlsbad, New Mexico**

WIPP HWFP #NM4890139088-TSDF

July, 2008

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Acronyms and Abbreviations

CBFO	Carlsbad Field Office
CFR	Code of Federal Regulations
DOE	Department of Energy
HWFP	Hazardous Waste Facility Permit
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
PMN	Permit Modification Notification
RCRA	Resource Conservation and Recovery Act
TSDF	Treatment, Storage and Disposal Facility
WIPP	Waste Isolation Pilot Plant
WTS	Washington TRU Solutions LLC

Overview of the Permit Modification Notifications

This document contains ten Class 1 Permit Modification Notifications (**PMNs**) to the Hazardous Waste Facility Permit (**HWFP**) at the Waste Isolation Pilot Plant (**WIPP**), Permit Number NM4890139088-TSDF hereinafter referred to as the WIPP HWFP.

These PMNs are being submitted by the U.S. Department of Energy (**DOE**), Carlsbad Field Office (**CBFO**) and Washington TRU Solutions LLC (**WTS**), collectively referred to as the Permittees, in accordance with the WIPP HWFP, Condition I.B.1 (20.4.1.900 New Mexico Administrative Code (**NMAC**) incorporating Title 40 of the Code of Federal Regulations (40 **CFR**) §270.42(a)). The PMNs in this document are necessary for the following reasons:

- | | |
|---------|---|
| Item 1 | The methods listed in the HWFP require updating. |
| Item 2 | The organization that maintains the list of personnel having hazardous waste management positions requires revision. |
| Item 3 | The job title for Visual Examination Expert (Level 1 and Level 2) is inconsistent with other sections of the HWFP, |
| Item 4 | Two building descriptions in the HWFP are incorrect. |
| Item 5 | Table B-5 should indicate heterogenous debris waste which is missing in the table but included elsewhere in the HWFP. |
| Item 6 | Reference to rail access for waste shipments should be removed since rail access is not among current plans for WIPP. |
| Item 7 | Table B3-3 should be consistent with HWFP text. |
| Item 8 | Various figures for the underground area require updating. |
| Item 9 | Final waste volume in Panel 3, which is incorrectly stated in the HWFP should be revised. |
| Item 10 | Update the emergency coordinator list. |

These changes do not reduce the ability of the Permittees to provide continued protection to human health and the environment.

The requested modifications to the WIPP HWFP and related supporting documents are provided in this PMN. The proposed modification to the text of the WIPP HWFP has been identified using a double underline and revision bar in the right hand margin for added information, and a ~~strikeout~~ font for deleted information. All direct quotations are indicated by italicized text.

Attachment A

Description of the Class 1 Permit Modification Notifications

Table 1. Class 1 Hazardous Waste Facility Permit Modification Notification

No.	Affected Permit Section	Item	Category	Attachment A Page #
1	Attachment B, B1 and B6	Tables B-1, B-2, B-3 and B-4, Sections B1-1a(1), B1-1a(3), B1-1a(4)(ii), B1-1a(4)(iii), B1-1c(1), B1-1c, B1-1c(1), B1-1c(3), B1-1c(5), B1 References, B6 #203, B6 #205	B.1.a	A-3
2	Attachment H	Section H-1a	B.5.b	A-14
3	Attachment H1	Table of Contents, Job Titles table, Visual Examination Expert job titles	B.5.b	A-15
4	Attachment F	Figure F-1a	A.1	A-19
5	Attachment B	Table B-5	A.1	A-20
6	Attachment G	Section G-1	A.1	A-22
7	Attachment B3	Section B3-5	A.1	A-23
8	Attachments	Figures F3, F5, I6, M1-1a, M2-1, M2-2, N1, O3-1 and O3-2	A.1	A-25
9	Module IV	Table IV.A.1	A.1	A-26
10	Attachment F	Table F-2	B.6.d	

Item 1

- Description:** Revise the HWFP to update the analytical methods listed in Attachment B, B-1 and B-6.
- Basis:** The change is a change to the waste sampling or analysis methods to conform with agency guidance or regulations and is therefore a Class 1 notification pursuant to 20.4.1.900 NMAC (incorporating 40 CFR 270.42, Appendix I, B.1.a).
- Discussion:** HWFP Condition II.C.1.b mandates that the Permittees require the generator/storage sites and Permittees' approved laboratories to use methods for the waste analysis of TRU mixed waste which are listed in Attachment B1. For those methods not in Attachment B1, generator/storage sites and Permittees' approved laboratories are to use *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, EPA Publication SW-846. Several of these methods have either been revised or deleted in the current revision of SW-846 and/or methods approved by EPA. To ensure that the generator/storage sites and Permittees' approved laboratories are using the correct methods, the Permittees are updating the methods specified in Attachment B.
- Permit Condition II.C.1.b states the following "*Updates to EPA Publication SW-846 shall be incorporated into this permit by reference.*" This change updates the HWFP with methods that are current and that meet this permit condition.
- The HWFP currently allows the use of either method TO-14 (in Attachments B, B-1 and B-6) or TO-15 (Attachments N, N1 and J1) for the analysis of gaseous organic compounds. The methods currently recommended by the EPA in the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air are TO-14A and TO-15. The CCP Program in Idaho is currently using the TO-14A method while others are using TO-15. When using method TO-14A other detectors such as flame ionization may be used in lieu of mass spectrometry.
- The Permittees have also added method 8315A to ensure that analysis of formaldehyde and hydrazine can be accommodated.
- In effort to comply with agency guidance the Permittees are modifying Attachments B, B-1 and B-6 to reflect the methods recommended by the EPA.

Revised Permit Text:

- a.1. Attachment B, Tables B-1, B-2, B-3, and B-4, Attachments B1 and B6

TABLE B-1
SUMMARY OF HAZARDOUS WASTE CHARACTERIZATION REQUIREMENTS
FOR TRANSURANIC MIXED WASTE ^a

Parameter	Techniques and Procedure
<u>Physical Waste Form</u> <u>Summary</u> <u>Category Names</u> S3000 Homogeneous Solid S4000 Soil/Gravel S5000 Debris Wastes	<u>Waste Inspection Procedures</u> Radiography Visual Examination (Permit Attachment B1-3)
<u>Headspace Gases</u> <u>Volatile Organic Compounds</u> Benzene Bromoform Carbon tetrachloride Chlorobenzene Chloroform 1,1-Dichloroethane 1,2-Dichloroethane 1,1-Dichloroethylene (cis)-1,2-Dichloroethylene (trans)-1,2-Dichloroethylene Ethyl benzene Ethyl ether Formaldehyde ^b Hydrazine ^c Methylene chloride 1,1,2,2-Tetrachloroethane Tetrachloroethylene Toluene 1,1,1-Trichloroethane Trichloroethylene 1,1,2-Trichloro-1,2,2-trifluoroethane Xylenes	<u>Gas Analysis ^f</u> Gas Chromatography /Mass Spectroscopy (GC/MS), EPA TO-14 <u>A TO-15</u> or modified SW-846 8240/8260 (Permit Attachment B3) GC/Flame Ionization Detector (FID), for alcohols and ketones, SW-846 8015 (Permit Attachment B3) Fourier Transform Infrared Spectroscopy (FTIRS), SW-846

TABLE B-1
SUMMARY OF HAZARDOUS WASTE CHARACTERIZATION REQUIREMENTS
FOR TRANSURANIC MIXED WASTE ^a

Parameter		Techniques and Procedure
<u>Total Volatile Organic Compounds</u>		<u>Total Volatile Organic Compound Analysis ^g</u>
Acetone	Isobutanol	TCLP, SW-846 1311 GC/MS, SW-846 8260 or 8240 GC/FID, SW-846 8015 (Permit Attachment B3) HPLC, SW-846 8315A Acceptable Knowledge for Summary Category S5000 (Debris Wastes)
Benzene	Methanol	
Bromoform	Methyl ethyl ketone	
Butanol	Methylene chloride	
Carbon disulfide	Pyridine ^d	
Carbon tetrachloride	1,1,2,2-Tetrachloroethane	
Chlorobenzene	Tetrachloroethylene	
Chloroform	Toluene	
1,4-Dichlorobenzene ^d	Trichlorofluoromethane	
1,2-Dichlorobenzene ^d	1,1,2-Trichloro-1,1,2-trifluoroethane	
1,2-Dichloroethane	1,1,1-Trichloroethane	
1,1-Dichloroethylene	1,1,2-Trichloroethane	
Ethyl benzene	Trichloroethylene	
Ethyl ether	Vinyl chloride	
Formaldehyde ^b	Xylenes	
Hydrazine ^c	(trans)-1,2-Dichloroethylene	
<u>Total Semivolatile Organic Compounds</u>		<u>Total Semivolatile Organic Compound Analysis ^g</u>
Cresols		TCLP, SW-846 1311 GC/MS, SW-846 8250 or 8270 (Permit Attachment B3) Acceptable Knowledge for Summary Category S5000 (Debris Wastes)
1,4-Dichlorobenzene ^e		
1,2-Dichlorobenzene ^e		
2,4-Dinitrophenol		
2,4-Dinitrotoluene		
Hexachlorobenzene		
Hexachloroethane		
Nitrobenzene		
Pentachlorophenol		
Pyridine ^e		
<u>Total Metals</u>		<u>Total Metals Analysis ^g</u>
Antimony	Mercury	TCLP, SW-846 1311 ICP- MS, SW-846 6020 , ICP Emission Spectroscopy, SW-846 6010 Atomic Absorption Spectroscopy , SW-846 7000 (Permit Attachment B3) Acceptable Knowledge for Summary Category S5000 (Debris Wastes)
Arsenic	Nickel	
Barium	Selenium	
Beryllium	Silver	
Cadmium	Thallium	
Chromium	Vanadium	
Lead	Zinc	

TABLE B-2
HEADSPACE TARGET ANALYTE LIST AND METHODS ^b

Parameter	EPA Specified Analytical Method
Benzene Bromoform Carbon tetrachloride Chlorobenzene Chloroform 1,1-Dichloroethane 1,2-Dichloroethane 1,1-Dichloroethylene (cis)-1,2-Dichloroethylene (trans)-1,2-Dichloroethylene Ethyl benzene Ethyl ether Methylene chloride 1,1,2,2-Tetrachloroethane Tetrachloroethylene Toluene 1,1,1-Trichloroethane Trichloroethylene 1,1,2-Trichloro-1,2,2-trifluoroethane Xylenes	EPA: Modified TO-14, <u>TO-15</u> ^a ; Modified 8240/8260 EPA - Approved FTIRS
Acetone Butanol Methanol Methyl ethyl ketone Methyl isobutyl ketone	EPA: Modified TO-14, <u>TO-15</u> ^a ; Modified 8240/8260 Method 8015 EPA - Approved FTIRS

^a U.S. Environmental Protection Agency (EPA), ~~1999~~ 1999, "Compendium Method TO-14, the Determination of Volatile Organic Compounds (VOC) in Ambient Air Using SUMMA® Passivated Canister Sampling and Gas Chromatographic Analysis," in Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air - Second Edition (EPA/625/R-96/010b), Research Triangle Park, North Carolina, Quality Assurance Division, Monitoring System Laboratory, U.S. EPA. The most current revision of the specified methods may be used.

^b Required only for debris waste when required to resolve the assignment of EPA hazardous waste numbers.

TABLE B-3
REQUIRED ORGANIC ANALYSES AND TEST METHODS
ORGANIZED BY ORGANIC ANALYTICAL GROUPS ^e

Organic Analytical Group	Required Organic Analyses	EPA Specified Analytical Method ^{a,d}
Nonhalogenated Volatile Organic Compounds (VOCs)	Acetone Benzene n-Butanol Carbon disulfide Ethyl benzene Ethyl ether Formaldehyde Hydrazine ^b Isobutanol Methanol Methyl ethyl ketone Toluene Xylenes	8015 8240 8260 <u>8315A</u>
Halogenated VOCs	Bromoform Carbon tetrachloride Chlorobenzene Chloroform 1,2-Dichloroethane 1,1-Dichloroethylene (trans)-1,2-Dichloroethylene Methylene chloride 1,1,2,2-Tetrachloroethane Tetrachloroethylene 1,1,2-Trichloroethane 1,1,1-Trichloroethane Trichloroethylene Trichlorofluoromethane 1,1,2-Trichloro-1,2,2-trifluoroethane Vinyl Chloride	8015 8240 8260
Semivolatile Organic Compounds (SVOCs)	Cresols (o, m, p) 1,2-Dichlorobenzene ^c 1,4-Dichlorobenzene ^c 2,4-Dinitrophenol 2,4-Dinitrotoluene Hexachlorobenzene Hexachloroethane Nitrobenzene Pentachlorophenol Pyridine ^c	8250 8270

^a U.S. Environmental Protection Agency (EPA), 1996, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," SW-846, Third Edition.

^b Generator/Storage Sites will have to develop an analytical method for hydrazine. This method will be submitted to the Permittees for approval.

^c These compounds may also be analyzed as VOCs by SW-846 Methods ~~8240 and~~ 8260.

^d TCLP (SW-846 1311) may be used to determine if compounds in 20.4.1.200 NMAC (incorporating 40 CFR §261, Subpart C) exhibit a toxicity characteristic.

^e Required only to resolve the assignment of EPA hazardous waste numbers.

TABLE B-4
SUMMARY OF SAMPLE PREPARATION AND
ANALYTICAL METHODS FOR METALS

Parameters	EPA-Specified Analytical Methods ^{a,b,c}
Sample Preparation	3051, or equivalent, as appropriate for analytical method
Total Antimony	6010, 6020, 7040, 7041 <u>7000, 7010</u> , 7062
Total Arsenic	6010, 6020, 7060 <u>7010</u> , 7061, 7062
Total Barium	6010, 6020, 7080, 7081 <u>7000, 7010</u>
Total Beryllium	6010, 6020, 7090, 7091 <u>7000, 7010</u>
Total Cadmium	6010, 6020, 7130, 7131 <u>7000, 7010</u>
Total Chromium	6010, 6020, 7190, 7191 <u>7000, 7010</u>
Total Lead	6010, 6020, 7420, 7421 <u>7000, 7010</u>
Total Mercury	7471
Total Nickel	6010, 6020, 7520, 7521 <u>7000, 7010</u>
Total Selenium	6010, 7740 <u>7010</u> , 7741, 7742
Total Silver	6010, 6020, 7760, 7761 <u>7000, 7010</u>
Total Thallium	6010, 6020, 7840, 7841 <u>7000, 7010</u>
Total Vanadium	6010, 7910, 7911 <u>7000, 7010</u>
Total Zinc	6010, 6020, 7950, 7951 <u>7000, 7010</u>

^a U.S. Environmental Protection Agency (EPA), 1996. "Test Methods for Evaluating Solid Waste," Laboratory Manual Physical/Chemical Methods, SW-846, 3rd ed., U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response, Washington, D.C.

^b TCLP (SW-846 1311) may be used to determine if compounds in 20.4.1.200 NMAC (incorporating 40 CFR §261, Subpart C) exhibit a toxicity characteristic.

^c Required only for homogeneous solids and soil/gravel to resolve the assignment of EPA hazardous waste numbers.

B1-1a(1) General Requirements

The Permittees shall require site personnel to collect samples in SUMMA® or equivalent canisters using standard headspace-gas sampling methods that meet the general guidelines established by the EPA in the Compendium Method TO-14A or TO-15, Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air (EPA 1999) ~~Redetermination of Volatile Organic Compounds (VOC) in Ambient Air using SUMMA® Passivated Canister Sampling and Gas~~

~~Chromatography Analysis (EPA 1988)~~ or by using on-line integrated sampling/analysis systems. Samples will be directed to an analytical instrument instead of being collected in SUMMA® or equivalent canisters if a single-sample on-line integrated sampling/analysis system is used. If a multi-sample on-line integrated sampling/analysis system is used, samples will be directed to an integrated holding area that meets the cleaning requirements of Section B1-1c(1). The leak proof and inert nature of the integrated holding area interior surface must be demonstrated and documented. Samples are not transported to another location when using on-line integrated sampling/analysis systems; therefore, the sample custody requirements of Section B1-4 and B1-5 do not apply. The same sampling manifold and sampling heads are used with on-line integrated sampling/analysis systems and all of the requirements associated with sampling manifolds and sampling heads must be met. However, when using an on-line integrated sampling/analysis system, the sampling batch and analytical batch quality control (**QC**) samples are combined as on-line batch QC samples as outlined in Section B1-1b.

B1-1a(3) Direct Canister Headspace Gas Sampling

The SUMMA® or equivalent sample canisters as specified in EPA's Compendium Method TO-14^A or TO-15 (EPA 1999 ~~1988~~) shall be used when sampling each drum. These heads shall form a leak-tight connection with the canister and allow sampling through the drum-lid filter, through the drum lid itself and/or rigid poly liner when necessary (by use of a punch or self-tapping screw), using an airtight fitting to collect the sample through the filter vent hole of a pipe overpack container, or using a hollow side port needle. Figure B1-4 illustrates the direct canister-sampling equipment.

B1-1a(4)(ii) Sampling Through the Drum Lid By Drum Lid Punching

Sampling through the drum lid at the time of drum punching or thereafter may be performed as an alternative to sampling through the drum's filter if an airtight seal can be maintained. To sample the drum headspace-gas through the drum lid at the time of drum punching or thereafter, the lid shall be breached using an appropriate punch. The punch shall form an airtight seal between the drum lid and the manifold or direct canister sampling equipment. To assure that the sample collected is representative, all of the general method requirements, sampling apparatus requirements, and QC requirements specified in EPA's Compendium Method TO-14^{A or TO-15} (EPA 1999 ~~1988~~) as appropriate, shall be met in addition to the following requirements:

B1-1a(4)(iii) Sampling Through a Pipe Overpack Container Filter Vent Hole

Sampling through an existing filter vent hole in a pipe overpack container (**POC**) may be performed as an alternative to sampling through the POC's filter if an airtight seal can be maintained. To sample the container headspace-gas through a POC filter vent hole, an appropriate airtight seal shall be used. The sampling apparatus shall form an airtight seal between the POC surface and the manifold or direct canister sampling equipment. To assure that the sample collected is representative, all of the general method, sampling apparatus, and QC requirements specified in EPA's Compendium Method TO-14^{A or TO-15} (EPA 1999 ~~1988~~) as appropriate, shall be met in addition to the following requirements:

B1-1c Equipment Testing, Inspection and Maintenance

All sampling equipment components that come into contact with headspace sample gases shall be constructed of relatively inert materials such as stainless steel or Teflon®. A passivated interior

surface on the stainless steel components is recommended.

To minimize the potential for cross contamination of samples, the headspace sampling manifold and sample canisters shall be properly cleaned and leak-checked prior to each headspace-gas sampling event. Procedures used for cleaning and preparing the manifold and sample canisters shall be equivalent to those provided in EPA's Compendium Method TO-14 A or TO-15 (EPA 1999 ~~1988~~). Cleaning requirements are presented below.

B1-1c(1) Headspace-Gas Sample Canister Cleaning

SUMMA® or equivalent canisters used in these methods shall be subjected to a rigorous cleaning and certification procedures prior to use in the collection of any samples. Guidance for the development of this procedure has been derived from Method TO-14 A or TO-15 (EPA 1999 ~~1988~~). Specific detailed instructions shall be provided in laboratory standard operating procedures (**SOPs**) for the cleaning and certification of canisters.

B1-1c(3) Sampling Equipment Routine Cleaning and Leak Check

The manifold and associated sampling heads which are reused shall be cleaned and checked for leaks in accordance with the cleaning and leak check procedures described in EPA's Compendium Method TO-14 A or TO-15 (EPA 1999 ~~1988~~). The procedures shall be conducted after headspace gas and field duplicate collection; after field blank collection, after field blanks are collected through the manifold; and after the additional cleaning required for field reference standard collection has been completed. The protocol for routine manifold cleaning and leak check requires that sample canisters be attached to the canister ports, or that the ports be capped or closed by valves, and requires that the sampling head be attached to the purge assembly.

B1-1c(5) Sampling Head Cleaning

To prevent cross contamination, the needle, airtight fitting or airtight seal, adapters, and filter of the sampling heads shall be cleaned in accordance with the cleaning procedures described in EPA's Compendium Method TO-14 (EPA 1988). After sample collection, a sampling head shall be disposed of or cleaned in accordance with EPA's Compendium Method TO-14 A or TO-15 (EPA 1999 ~~1988~~), prior to reuse. As a further QC measure, the needle, airtight fitting or airtight seal, and filter, after cleaning, should be purged with zero air, nitrogen, or helium and capped for storage to prevent sample contamination by VOCs potentially present in ambient air.

B1-7 List of References

Bechtel BWXT Idaho, LLC (BWXT), 2000, Determination of Drum Age Criteria and Prediction Factors Based on Packaging Configurations, INEEL/EXT-2000-01207, October 2000, Liekhus, K.J., S.M. Djordjevic, M. Devarakonda, and M.J. Connolly, Idaho National Engineering and Environmental Laboratory, Idaho Falls, Idaho.

Lockheed Idaho Technologies Company, 1995, Position for Determining Gas Phase Volatile Organic Compound Concentrations in Transuranic Waste Containers, INEL-95/0109/Revision 1, M.J. Connolly, et. al.

U.S. Environmental Protection Agency (EPA), ~~1988, "Compendium Method TO-14, The~~

Determination of Volatile Organic Compounds (VOC) in Ambient Air Using SUMMA Passivated Canister Sampling and Gas Chromatographic Analyses."- Compendium of Methods for Determination of Toxic Organic Compounds in Ambient Air ([EPA/625/R-96/010b, January 1999](#)); Research Triangle Park, North Carolina, Quality Assurance Division, Environmental Monitoring Systems Laboratory, U.S. Environmental Protection Agency.

U.S. Environmental Protection Agency (EPA), 1996. Test Methods for Evaluating Solid Waste, "Laboratory Manual Physical/Chemical Methods, SW-846, 3rd ed., U.S. EPA, OSW and ER, Washington D.C.

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Are procedures in place to ensure that sample containers are cleaned in accordance with the following specifications:

- All sampling components that contact sample gases are constructed of inert materials such as stainless steel or Teflon®
- The sampling manifold and canisters are properly cleaned and leak checked prior to each sampling event in accordance to or equivalent with TO-14 A or TO-15 methodology
- SUMMA® canisters or equivalent are cleaned on an equipment cleaning batch basis. An equipment cleaning batch is defined as the number of canisters that can be cleaned together at one time using the same cleaning method
- The cleaning system consists of an optional oven and a vacuum manifold which uses a dry vacuum pump or a cryogenic trap backed by an oil sealed pump
- Prior to cleaning a 24 hour leak check shall be performed (+/- 2 psig) on all canisters
- Canisters that shall be checked for leaks, repaired, and reprocessed
- One canister per equipment cleaning batch is filled with humid zero air or humid high purity nitrogen and analyzed for VOCs
- A batch is considered clean if VOC concentrations are less than 3 times the MDLs specified in Table B3-2
- Certified leak-free canisters are evacuated to 0.1 mm Hg or less for storage
- Canister cleaning certification documentation is available at the cleaning facility and the cleaning facility initiates canister tags.

(Section B1-1c, B1-1c(1))

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Are procedures in place to ensure that sampling equipment are cleaned and leak checked using the following specifications:

- Surfaces of all sampling equipment that will come in contact with sample gases are thoroughly inspected and cleaned prior to assembly
- Manifolds and sampling heads shall be purged with humidified zero air, nitrogen, or helium and leak checked after assembly
- The cleaning shall be repeated if routine system cleaning is inadequate
- Manifolds and sampling heads which are reused shall be cleaned and leak checked according to procedures in the EPA's Compendium Method TO-14 A or TO-15 after sample collection, field duplicate collection, field blank collection, and after the additional cleaning require for field reference samples. All manifold ports shall be capped or closed with valves (sample canisters may be attached as well)
- Manifolds are cleaned by heating the sample side of the manifold to 150 °C and periodically evacuated and flushed with humidified zero air, nitrogen, or helium
- Manifolds not in use are demonstrated as clean before storage with a positive pressure of humidified zero air, nitrogen, or helium gas in the sampling and standard sides
- Sampling is suspended when the analysis of an equipment blank indicated the VOC limits have been exceeded or if a leak test fails.
- Sampling systems are cleaned after field reference standard collection by installing a gas tight connector in place of the sampling head, between the flexible hose and purge assembly. This allows the sample and standard side to be flushed with humidified zero air, nitrogen, or helium in conjunction with heated pneumatic lines
- Needles, airtight fitting or seal, adapters, and filters are cleaned in accordance with the EPA Method TO-14 A or TO-15 procedures. Sample heads shall be discarded or cleaned according to Method TO-15. In addition, the needle, the airtight fitting and seal, and the filter should be purged with zero air, nitrogen, or helium and capped for storage

(Section B1-1c(2) , Section B1-1c(3), Section B1-1c(4), and Section B1-c(5))

Item 2

- Description:** Revise the HWFP to update the organization that is responsible for maintaining the list of personnel who manage hazardous waste.
- Basis:** The change is classified as a "*change in the training plan - other*" and is therefore a Class 1 notification pursuant to 20.4.1.900 NMAC (incorporating 40 CFR 270.42, Appendix I, B.5.b).
- Discussion:** Section H-1a states: "*A list of hazardous waste management job titles and position descriptions are provided in Attachment H1. An up-to-date list of personnel assigned to these positions is maintained by Environmental Compliance and Support...*"
- The organizational title Environmental Compliance and Support is no longer used at WIPP. Training records are currently maintained by the Technical Training Department. In order to avoid the need to modify the HWFP in the future the Permittees are changing "Environmental Compliance and Support" to "the Permittees."

Revised Permit Text:

H-1a Job Title/Job Description

Employees at the WIPP facility who are involved in hazardous waste management activities receive the same core training. A list of hazardous waste management job titles and position descriptions are provided in Permit Attachment H1. An up-to-date list of personnel assigned to these positions is maintained by ~~Environmental Compliance & Support~~ the Permittees in accordance with 20.4.1.500 NMAC (incorporating 40 CFR §264.16).

Item 3

- Description:** Revise the job title for Visual Examination Expert Level 1 and Visual Examination Expert Level 2 to be consistent with the text in Attachment B7.
- Basis:** The change is classified as a "*change in the training plan - other*" and is therefore a Class 1 notification pursuant to 20.4.1.900 NMAC (incorporating 40 CFR 270.42, Appendix I, B.5.b).
- Discussion:** Attachment H1 lists two job titles relative to visual examination (VE). Those titles are:
Visual Examination Expert Level 1 and
Visual Examination Expert Level 2.
- Attachment B7, Section B7-1c, B7-1c(1) and B7-1c(2) indicate that the Permittees have available VE operators to perform confirmation using VE and that at least one of the confirmation personnel be designated as a VE expert. In order to indicate that the Permittees' Visual Examination Experts are also Visual Examination Operators, the Permittees are changing the job titles to include the term "Operator."
- The Permittees are changing the job titles as follows:
Visual Examination Expert Level 1 (VE Independent Technical Reviewer) be changed to Visual Examination Operator/Expert Level 1 (VE Independent Technical Reviewer) and
Visual Examination Expert Level 2 (VE Independent Technical Reviewer) be changed to Visual Examination Operator/Expert Level 2 (VE Independent Technical Reviewer).
- This training applies to VE operators, VE independent operators and VE independent technical reviewers.

Revised Permit Text:

ATTACHMENT H1

Job Descriptions	H1-3
Hazardous Waste Worker	H1-4
TRU Mixed Waste Handlers	H1-5
Underground Hazardous Waste Worker	H1-6
Site-Generated Waste Handlers	H1-7
Transportation Engineer	H1-8
WWIS Data Administrator	H1-9
Manager, Waste Handling	H1-10
Manager, Transportation Operations	H1-11

Radiological Control Technician	H1-12
Manager, Radiation Control	H1-14
Technical Trainer	H1-15
Manager, Technical Training	H1-16
Emergency Services Technician	H1-17
Quality Assurance Technician	H1-18
Team Leader, Inspection Services	H1-19
Facility Inspection, Repair, and Service Team (FIRST) Leader	H1-20
Facility Inspection, Repair, and Service Team (FIRST)	H1-21
Sampling Team Member	H1-22
Sampling Team Assistant	H1-23
Manager, Environmental Compliance	H1-24
Facility Shift Engineer	H1-25
Facility Shift Manager	H1-26
Central Monitoring Room Operator	H1-27
Waste Hoist Operator	H1-28
Waste Hoist Shaft Tender	H1-29
Waste Hoisting Manager	H1-30
Chief Office Warden	H1-31
Assistant Chief Office Warden	H1-32
Mine Rescue Team Member	H1-33
First Line Initial Response Team member	H1-34
Emergency Response Team	H1-35
Fire Brigade	H1-36
Fire Protection Technician	H1-37
Radiographer Level 1 (Radiography Independent Technical Reviewer)	H1-38
Radiographer Level 2 (Radiography Independent Technical Reviewer)	H1-39
Visual Examination <u>Operator</u> /Expert Level 1 (VE Independent Technical Reviewer)	H1-40
Visual Examination <u>Operator</u> /Expert (Level 2) (VE Independent Technical Reviewer)	H1-41
Permittees' Management Representative	H1-42

ATTACHMENT H1

RCRA HAZARDOUS WASTE MANAGEMENT JOB TITLES AND DESCRIPTIONS

1	
2	RCRA Hazardous Management Job Titles
3	Hazardous Waste Worker
4	TRU Mixed Waste Handlers
5	Underground Hazardous Waste Worker
6	Site-Generated Waste Handlers
7	Transportation Engineer
8	WWIS Data Administrator
9	Manager, Waste Handling
10	Manager, Shipping Coordination
11	Radiological Control Technician
12	Manager, Radiation Control
13	Technical Trainer
14	Manager, Technical Training
15	Emergency Services Technician
16	Quality Assurance Technician
17	Team Leader, Inspection Services
18	Facility Inspection, Repair, and Service Team (FIRST) Leader
19	Facility Inspection, Repair, and Service Team (FIRST)
20	Sampling Team Member
21	Sampling Team Assistant
22	Manager, Environmental Compliance
23	Facility Shift Engineer
24	Facility Shift Manager
25	Central Monitoring Room Operator
26	Waste Hoist Operator
27	Waste Hoist Shaft Tender
28	Waste Hoisting Manager
29	Chief Office Warden
30	Assistant Chief Office Warden
31	Mine Rescue Team Member
32	First Line Initial Response Team member
33	Emergency Response Team
34	Fire Brigade
35	Fire Protection Technician

RCRA Hazardous Management Job Titles

Radiographer (Radiography Independent Technical Reviewer)
Visual Examination Operator/Expert (VE Independent Technical Reviewer)
Permittees' Management Representative

RCRA Hazardous Waste Management Job Descriptions

Position Title: Visual Examination Operator/Expert Level 1 (VE Independent Technical Reviewer)

RCRA Hazardous Waste Management Job Descriptions

Position Title: Visual Examination Operator/Expert Level 2 (VE Independent Technical Reviewer)

Item 4

Description:

Revise the description of two facilities.

Basis:

The change is classified as an "*administrative and informational change*" and is therefore a Class 1 notification pursuant to 20.4.1.900 NMAC (incorporating 40 CFR 270.42, Appendix I, A.1).

Discussion:

Figure F-1a lists facility number 457N as Water Tank 25-D-001A and facility number 457S as Water Tank 25-D-001B. These descriptions are incorrect. Facility number 457N should be Water Tank 25-D-001B and facility number 457S should be Water Tank 25-D-001A.

Revised Permit Text:

A revised Figure F-1a is included in Attachment B.

BLDG./ FAC.#	DESCRIPTION	BLDG./ FAC.#	DESCRIPTION	BLDG./ FAC.#	DESCRIPTION
#241	EQUIPMENT SHED	#384	SALT HANDLING SHAFT HOISTHOUSE	#475	GATEHOUSE
#242	GUARDSHACK	#384A	MINING OPERATIONS	#480	VEHICLE FUEL STATION
#243	SALT HAULING TRUCKS SHELTER	#411	WASTE HANDLING BUILDING	#481	WAREHOUSE ANNEX
#245	TRUPACT TRAILER SHELTER	#412	TRUPACT MAINTENANCE BUILDING	#482	EXHAUST SHAFT HOIST EQUIP. WAREHOUSE
#246	MgO STORAGE SHELTER	#413	EXHAUST SHAFT FILTER BUILDING	#485	SULLAIR COMPRESSOR BUILDING
#253	13.8 KV SWITCHGEAR 25p-SWG15/1	#413A	MONITORING STATION A	#486	ENGINEERING BUILDING
#254.1	AREA SUBSTATION NO. 1 25P-SW15.1	#413B	MONITORING STATION B	#489	TRAINING BUILDING
#254.2	AREA SUBSTATION NO. 2 25P-SW15.2	#414	WATER CHILLER FACILITY & BLDG	#H-16	SANDIA TEST WELL
#254.3	AREA SUBSTATION NO. 3 25P-SW15.3	#451	SUPPORT BUILDING	#917	AIS MONITORING
			SAFETY & EMERGENCY SERVICES FACILITY		
#254.4	AREA SUBSTATION NO. 4 25P-SW15.4	#452	WAREHOUSE/SHOPS BUILDING	#918	VOC TRAILER
#254.5	AREA SUBSTATION NO. 5 25P-SW15.5	#453	AUXILIARY WAREHOUSE BUILDING	#918A	VOC AIR MONITORING STATION
#254.6	AREA SUBSTATION NO. 6 25P-SW15.6	#456	WATER PUMPHOUSE	#918B	VOC LAB TRAILER
#254.7	AREA SUBSTATION NO. 7 25P-SW15.7	#457N	WATER TANK 25-D-001A ^B	#950	WORK CONTROL TRAILER
#254.8	AREA SUBSTATION NO. 8 25P-SW15.8	#457S	WATER TANK 25-D-001B ^A	#951	PROCUREMENT/PURCHASING
#254.9	480V SWITCHGEAR (25P-SWGO4/9)	#458	GUARD AND SECURITY BUILDING	#952	TRAILER
#255.1	BACK-UP DIESEL GENERATOR #1 25-PE 503	#459	CORE STORAGE BUILDING	#965	SAMPLE LABORATORY TRAILER
#255.2	BACK-UP DIESEL GENERATOR #2 25-PE 504	#463	COMPRESSOR BUILDING	#971	HUMAN RESOURCES TRAILER
#256.4	SWITCHBOARD #4 (25P-SBD04/4)			#986	PUBLICATIONS & PROCEDURES TRAILER
#311	WASTE SHAFT	#465	AUXILIARY AIR INTAKE	SWR NO. 6	SWITCHRACK NO. 6
#351	EXHAUST SHAFT	#468	TELEPHONE HUT	SWR NO. 7	7A, 7B SWITCHRACK NO. 7, 7A, 7B
#361	AIR INTAKE SHAFT	#473	ARMORY BUILDING	SWR NO. 7C	SWITCHRACK NO. 7C
#362	AIR INTAKE SHAFT/HOIST HOUSE	#474	HAZARDOUS WASTE STORAGE FACILITY	SWR NO. 10	SWITCHRACK NO. 10
#363	AIR INTAKE SHAFT/WINCH HOUSE	#474A	HAZARDOUS WASTE STORAGE BUILDING	SWR NO. 11	SWITCHRACK NO. 11
#364	EFFLUENT MONITORING INSTRUMENT SHED A	#474B	HAZARDOUS WASTE STORAGE BUILDING	SWR NO. 12	SWITCHRACK NO. 12
#364	EFFLUENT MONITORING INSTRUMENT SHED B	#474C	OIL & GREASE STORAGE BUILDING	SWR NO. 15	SWITCHRACK NO. 15
#365	AIR INTAKE SHAFT HEADFRAME	#474D	GAS BOTTLE STORAGE BUILDING		
#366	SALT HANDLING SHAFT	#474E	HAZARD MATERIAL STORAGE BUILDING		
#371	SALT HANDLING SHAFT HEADFRAME	#474F	WASTE OIL RETAINER		
#372					

Figure F-1a
Legend to Figure F-1

Item 5

Description: Revise the language in Table B-5 to be consistent with the text in Attachment B.

Basis: The change is classified as an "*administrative and informational change*" and is therefore a Class 1 notification pursuant to 20.4.1.900 NMAC (incorporating 40 CFR 270.42, Appendix I, A.1).

Discussion: Attachment B, Section B-0a indicates that debris waste may consist of "*heterogenous debris waste*" among other items as well. In Table B-5 the word "*debris*" was inadvertently omitted. This change will ensure that both the text and the table are consistent.

Revised Permit Text:

Table B-5 (Stored Waste)

Waste Matrix Code Summary Categories	Waste Matrix Code Groups	Characterization Parameter	Method	Rationale
S3000-Homogeneous Solids S4000-Soil/Gravel	<ul style="list-style-type: none"> Solidified inorganics Salt waste Solidified organics Contaminated soil/debris 	Physical waste form	Acceptable knowledge, radiography, and/or visual examination	<ul style="list-style-type: none"> Determine waste matrix Demonstrate compliance with waste acceptance criteria (e.g., no free liquids, no incompatible wastes, no compressed gases)
		Hazardous constituents <ul style="list-style-type: none"> Listed Characteristic 	Acceptable knowledge or statistical sampling ^a (see Tables B-3 and B-4)	<ul style="list-style-type: none"> Determine characteristic metals and organics Resolve the assignment of EPA hazardous waste numbers
S5000-Debris Waste	<ul style="list-style-type: none"> Uncategorized metal (metal waste other than lead/cadmium) Lead/cadmium waste Inorganic nonmetal waste Combustible waste Graphite waste Heterogeneous <u>debris</u> waste Composite filter waste 	Physical waste form	Acceptable knowledge, radiography, and/or visual examination	<ul style="list-style-type: none"> Determine waste matrix Demonstrate compliance with waste acceptance (e.g., no free liquids, no incompatible wastes, no compressed gases)
		Hazardous constituents <ul style="list-style-type: none"> Characteristic Listed 	Statistical gas sampling and analysis ^a (see Table B-2)	<ul style="list-style-type: none"> Resolve the assignment of EPA hazardous waste numbers
		Hazardous constituents <ul style="list-style-type: none"> Characteristic 	Acceptable knowledge	<ul style="list-style-type: none"> Determine characteristic metals and organics

Table B-5 (Newly Generated Waste)

Waste Matrix Code Summary Categories	Waste Matrix Code Groups	Characterization Parameter	Method	Rationale
S3000-Homogeneous Solids	<ul style="list-style-type: none"> Solidified inorganics Salt waste Solidified organics 	Physical waste form	Acceptable knowledge, radiography, and/or visual examination	<ul style="list-style-type: none"> Determine waste matrix Demonstrate compliance with waste acceptance criteria (e.g., no free liquids, no incompatible wastes, no compressed gases)
		Hazardous constituents <ul style="list-style-type: none"> Listed Characteristic 	Statistical sampling ^a (see Tables B-3 and B-4)	<ul style="list-style-type: none"> Determine characteristic metals and organics Resolve the assignment of EPA hazardous waste numbers
S4000-Soil/Gravel	<ul style="list-style-type: none"> Contaminated soil/debris 	Physical waste form	Acceptable knowledge, radiography, and/or visual examination	<ul style="list-style-type: none"> Determine waste matrix Demonstrate compliance with waste acceptance criteria (e.g., no free liquids, no incompatible wastes, no compressed gases)
		Hazardous constituents <ul style="list-style-type: none"> Characteristic Listed 	Statistical gas sampling and analysis ^a (see Table B-2)	<ul style="list-style-type: none"> Resolve the assignment of EPA hazardous waste numbers
		Hazardous constituents <ul style="list-style-type: none"> Characteristic 	Acceptable knowledge	<ul style="list-style-type: none"> Determine characteristic metals and organics Determine total quantity of metals, VOCs, and semi-VOCs
S5000-Debris Waste	<ul style="list-style-type: none"> Uncategorized metal (metal waste other than lead/cadmium) Lead/cadmium waste Inorganic nonmetal waste Combustible waste Graphite waste Heterogeneous <u>debris</u> waste Composite filter waste 	Physical waste form	Acceptable knowledge, radiography, and/or visual examination	<ul style="list-style-type: none"> Determine waste matrix Demonstrate compliance with waste acceptance criteria (e.g., no free liquids, no incompatible wastes, no compressed gases)
		Hazardous constituents <ul style="list-style-type: none"> Characteristic Listed 	Statistical gas sampling and analysis ^a (see Table B-2)	<ul style="list-style-type: none"> Resolve the assignment of EPA hazardous waste numbers
		Hazardous constituents <ul style="list-style-type: none"> Characteristic 	Acceptable knowledge	<ul style="list-style-type: none"> Determine characteristic metals and organics Determine total quantity of metals, VOCs, and semi-VOCs

Item 6

- Description:** Revise the language in Attachment G, Section G-1 to remove references to waste receipt via rail.
- Basis:** The change is classified as an "*administrative and informational change*" and is therefore a Class 1 notification pursuant to 20.4.1.900 NMAC (incorporating 40 CFR 270.42, Appendix I, A.1).
- Discussion:** Attachment G, Section G-1 indicates that waste may be received via rail shipment. The Permittees intend to physically remove a portion of the rail line (outside of the permitted facility) Receipt of waste via rail is not among current plans for WIPP. This change will make the HWFP consistent with current operational status.

Revised Permit Text:

G-1 Traffic Information and Traffic Patterns

Access to the WIPP facility is provided by two access roads that connect with U.S. Highway 62/180, 13 mi (21 km) to the north, and NM Highway 128 (Jal Highway), 4 mi (6.4 km) to the south (Figure G-1). The northern access road, which connects the site to U.S. Highway 62/180, is an access road built specifically for the Permittees that will be used to transport TRU mixed waste from the highway to the site. The southern access road is a county highway maintained by Eddy County. Signs and pavement markings are located in accordance with the Uniform Traffic Control Devices Manual. Access-road design designation parameters, such as traffic volume, are presented in Table G-1.

~~Rail access is available and may be used for TRU mixed waste transport during the Disposal Phase. Rail access is from the west across the southern access road (marked by railroad crossing signs), but does not cross the northern access road used by the tractor-trailers (Figure G-2). The roadway is raised above the surrounding terrain, ensuring clear visibility of all on-site rail movements. Security opens a locked gate at the West end of the PPA when rail shipments arrive and closes it while the locomotive is on site. The reverse takes place as the locomotive departs. The road crossing will not be blocked for extended periods of time. A railcar mover is used to move railcars into and out of the WHB for waste handling operations when the locomotive is not on site. The alternate truck route to the parking area HWMU at the east end of the WHB will be staffed by the Permittees to protect the crossing during any railcar movements into or out of the WHB.~~

Item 7

Description: Revise the language in Attachment B3, Section B3-5 to be consistent with the tables in Attachment B3.

Basis: The change is classified as an "*administrative and informational change*" and is therefore a Class 1 notification pursuant to 20.4.1.900 NMAC (incorporating 40 CFR 270.42, Appendix I, A.1).

Discussion: Attachment B3, Section B3-5 indicates that the GC/MS Tunes, Initial Calibrations and Continuing Calibration will be performed and evaluated using the procedures and criteria specified in Table B3-3. Some of this required information was inadvertently omitted from this table. This modification will make Table B3-3 consistent with the text.

Revised Permit Text:

**TABLE B3-3
SUMMARY OF LABORATORY QUALITY CONTROL SAMPLES AND FREQUENCIES FOR
GAS VOLATILE ORGANIC COMPOUND ANALYSIS**

QC Sample	Minimum Frequency	Acceptance Criteria	Corrective Action ^a
Method performance samples	Seven (7) samples initially and four (4) semiannually	Meet method QAOs	Repeat until acceptable
Laboratory duplicates or on-line duplicates	One (1) per analytical batch or on-line batch	RPD \leq 25 ^b	Nonconformance if RPD >25
Laboratory blanks or on-line blanks	Daily prior to sample analysis for GC/MS and GC/FID. Otherwise, daily prior to sample analysis and one (1) per analytical batch or on-line	Analyte amounts \leq 3 x MDLs for GC/MS and GC/FID; \leq PRQL for FTIRS	Flag Data if analyte amounts > 3 x MDLs for GC/MS and GC/FID; > PRQL for FTIRS
Laboratory control samples or on-line control samples	One (1) per analytical batch or on-line batch	70-130 %R	Nonconformance if %R <70 or >130
GC/MS comparison sample (for FTIRS only)	One (1) per analytical or on-line batch	RPD \leq 25 ^b	Nonconformance if RPD > 25
Blind audit samples	Samples and frequency controlled by the Gas PDP Plan	Specified in the Gas PDP Plan	Specified in the Gas PDP Plan
<u>GC/MS</u>	<u>BFB Tune</u> <u>Every 12 hours</u>	<u>Abundance criteria for key ions are met</u>	<u>Repeat Until Acceptable</u>

TABLE B3-3
SUMMARY OF LABORATORY QUALITY CONTROL SAMPLES AND FREQUENCIES FOR
GAS VOLATILE ORGANIC COMPOUND ANALYSIS

QC Sample	Minimum Frequency	Acceptance Criteria	Corrective Action ^a
<u>GC/MS</u>	<u>Minimum 5-point initial calibration (minimum of 5 standards) Initially and as needed</u>	<u>%RSD of response factor for each target analyte <35</u>	<u>Repeat Until Acceptable</u>
<u>GC/MS</u>	<u>Continuing calibration Every 12 hours</u>	<u>%D for all target analytes ≤ 30 of initial calibration</u>	<u>Repeat Until Acceptable</u>
<u>GC/FID</u>	<u>Minimum 3-point initial calibration (minimum 3 standards) Initially and as needed</u>	<u>Correlation coefficient ≥ 0.99 or %RSD <20 for each target analyte and the retention time of each target analyte within an acceptance criteria defined in the method</u>	<u>Repeat Until Acceptable</u>
<u>GC/FID</u>	<u>Continuing calibration Every 12 hours</u>	<u>%RSD ≤ 15%</u>	<u>Repeat Until Acceptable</u>

^a Corrective action per Section B3-13 when final reported QC samples do not meet the acceptance criteria.
^b Applies only to concentrations greater than the PRQLs listed in Table B3-2.

MDL = Method Detection Limit
 QAO = Quality Assurance Objective
 PDP = Performance Demonstration Program
 PRQL = Program Required Quantitation Limit
 %R = Percent Recovery
 RPD = Relative Percent Difference
BFB = 4-Bromofluorobenzene
%D = Percent difference
%RSD = Percent relative standard deviation

Item 8

Description: Revise various figures in the WIPP surface and underground facilities to reflect current configurations.

Basis: The change is classified as an "*administrative and informational change*" and is therefore a Class 1 notification pursuant to 20.4.1.900 NMAC (incorporating 40 CFR 270.42, Appendix I, A.1).

Discussion: Various figures in the HWFP of the WIPP underground area are being revised to reflect a new area mined for underground shops. These include Figures F-3, F-5, I-6, M2-1, M2-2, N-1, O3-1 and O3-2. Figure F-3 has been annotated with a "cloud" showing where the change was made. This figure is for informational purposes only. Included in Attachment B of this notification are "clean" figures with the change incorporated.

Figure M1-1a is being revised to indicate that an airlock does not exist between the Waste Handling Building and the TMF. Figure M1-1a has been annotated with a "cloud" showing where the change was made. This figure is for informational purposes only. Included in Attachment B of this notification is the "clean" figure with the change incorporated.

Revised Permit Text:

Revised Figures F-3, F-5, I-6, M1-1a, M2-1, M2-2, N-1, O3-1 and O3-2 are included in Attachment B.

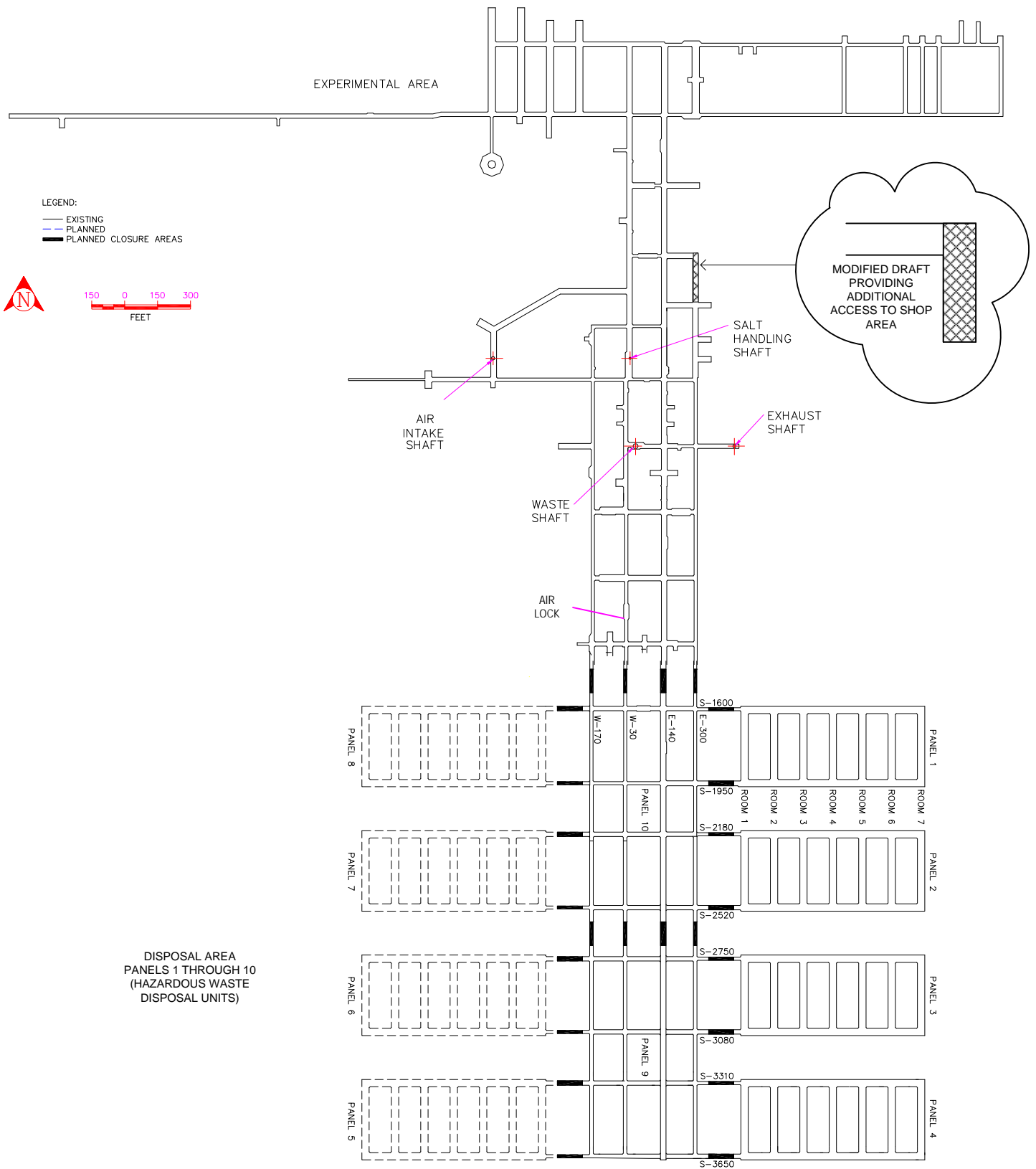


Figure F-3
 WIPP Underground Facilities

For informational purposes only – not to be included in Permit

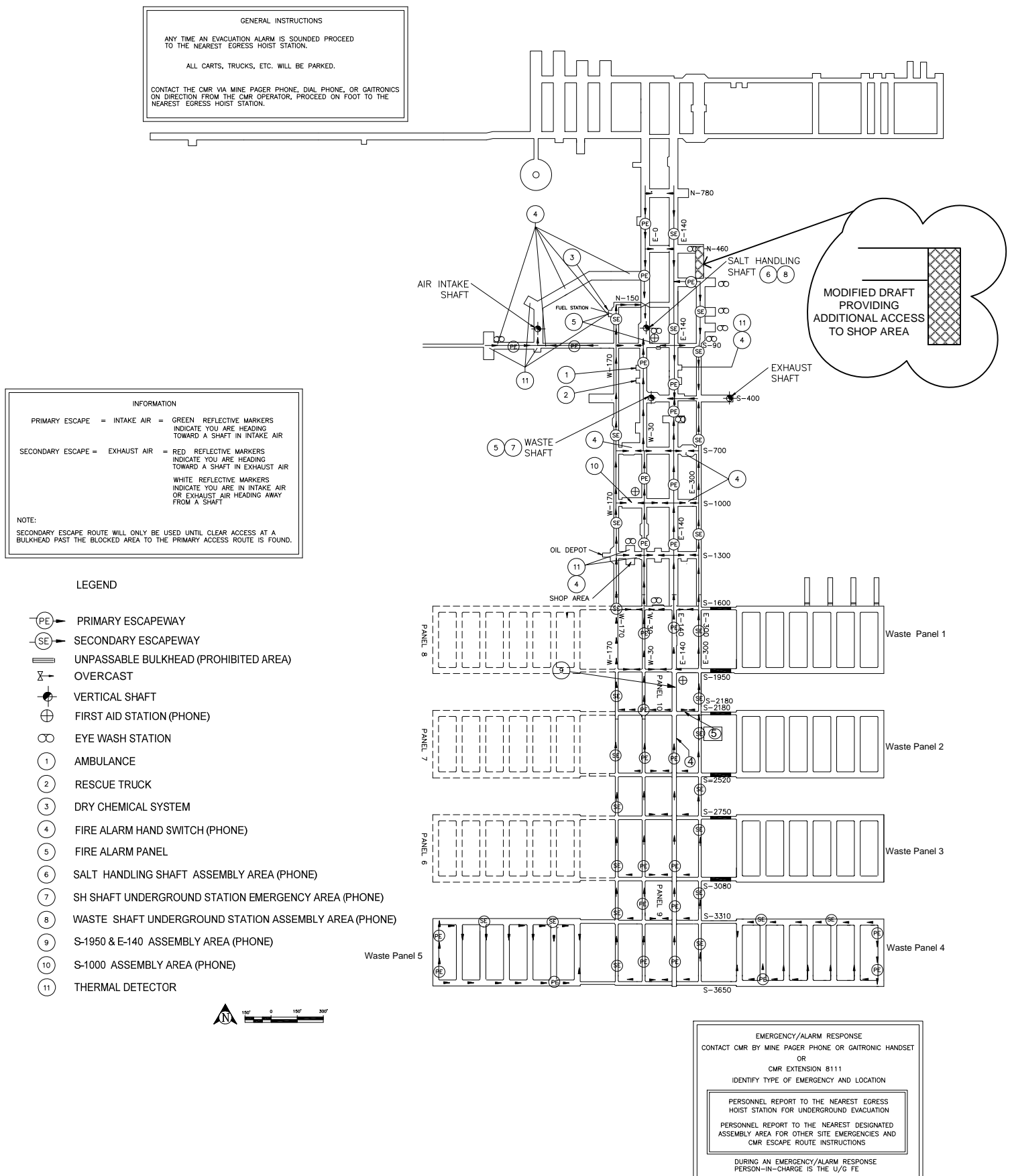


Figure F-5
Underground Emergency Equipment Locations and Underground Evacuation Routes

For informational purposes only – not to be included in Permit

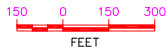
WIPP-19

WIPP-22

EXPERIMENTAL AREA

LEGEND:

- EXISTING
- - - PLANNED
- PLANNED CLOSURE AREAS



BOREHOLE	DEPTH (FT)
ERDA-9	2878
WIPP-19	1038
WIPP-21	1049
WIPP-22	1450
B-25	902
H-1	848
H-2c	795
H-3b1	902
H-16	851
P-3	1576

REPOSITORY DEPTH: 2150 FEET

P-3

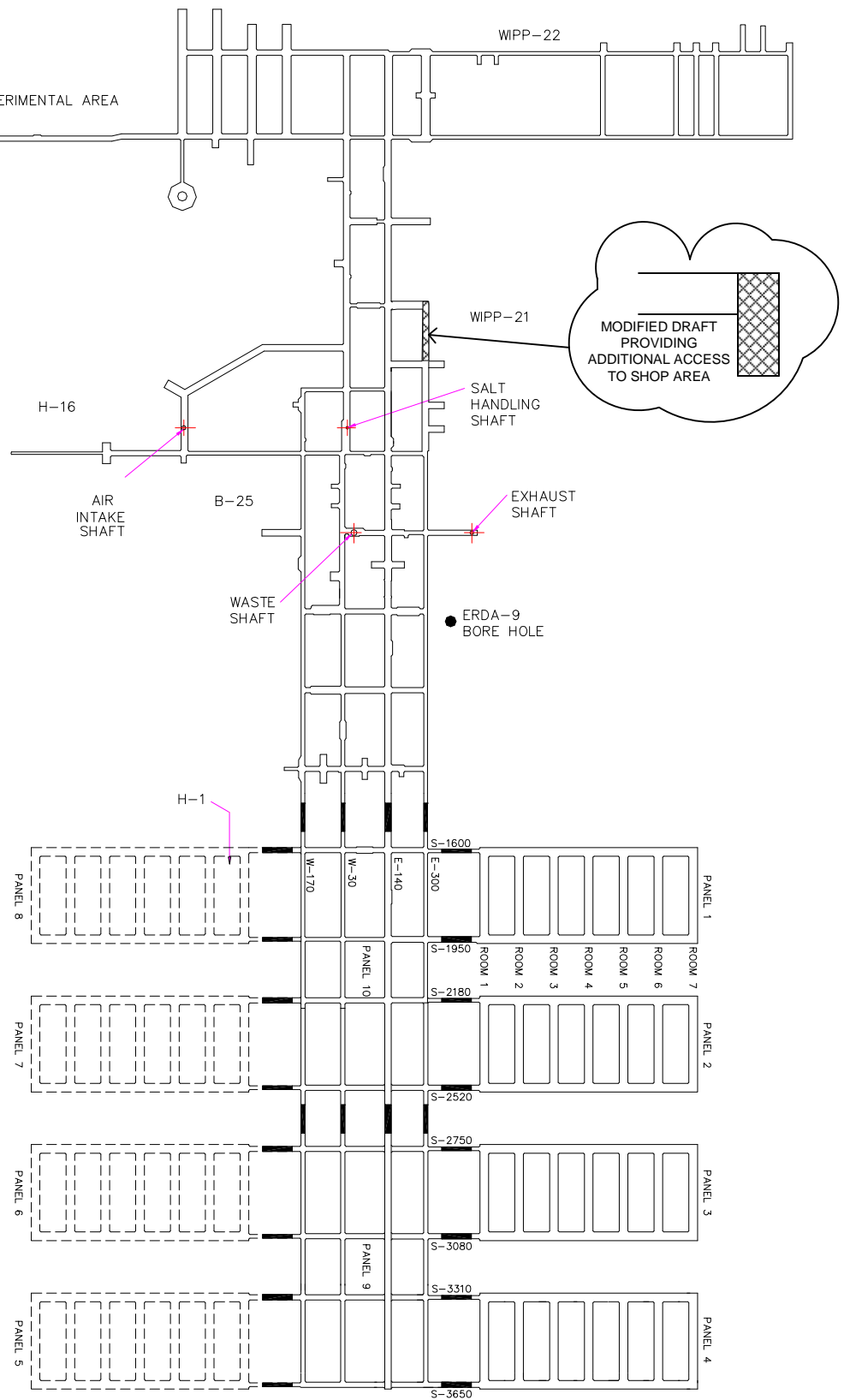
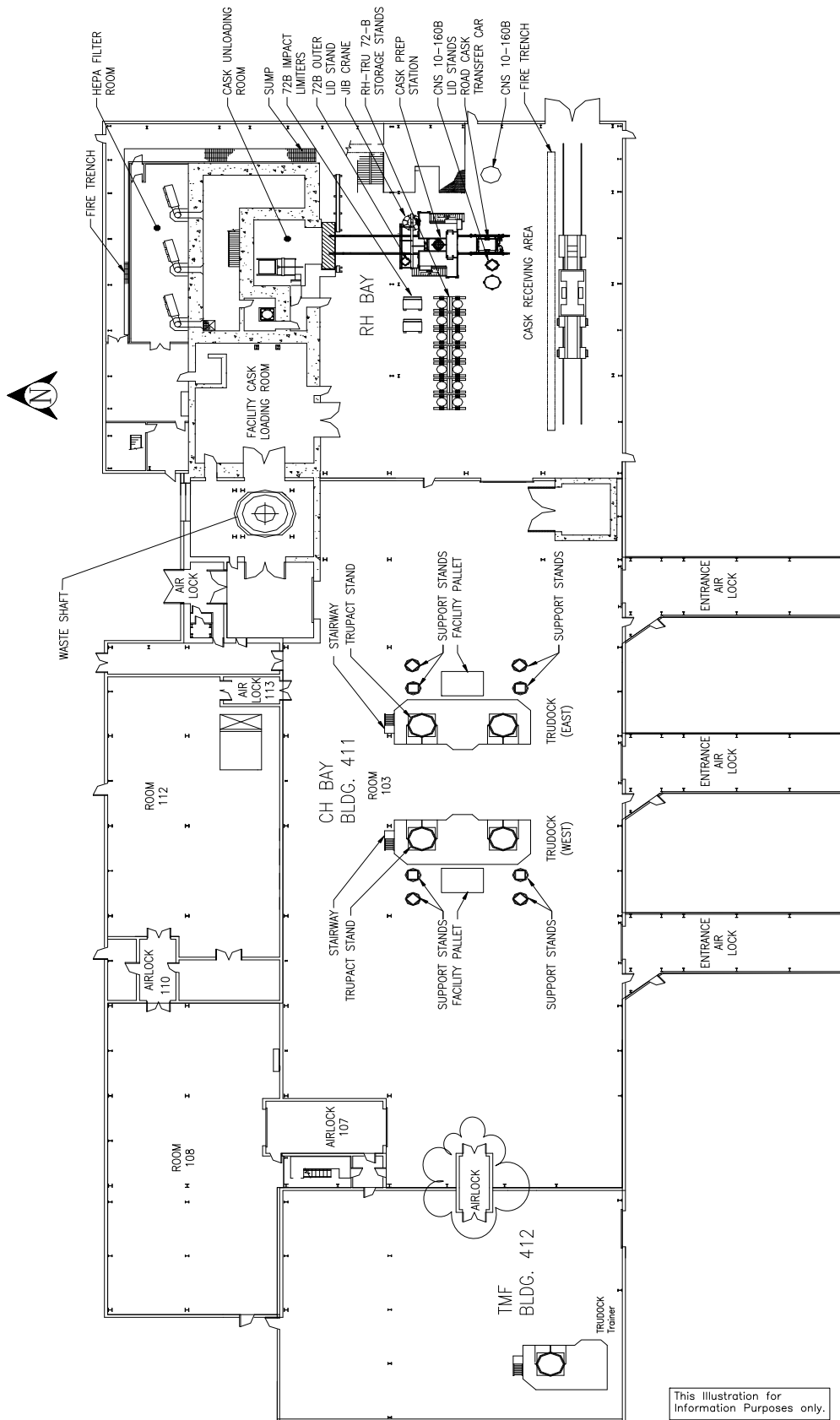


Figure I-6

H-3b1

Approximate Location of Boreholes in Relation to the WIPP Underground

For informational purposes only – not to be included in Permit



This illustration for
Information Purposes only.

Figure M1-1a
Waste Handling Building Plan (Ground Floor)

NTP-03-074
WASTE HANDLING BUILDING

For informational purposes only – not to be included in Permit

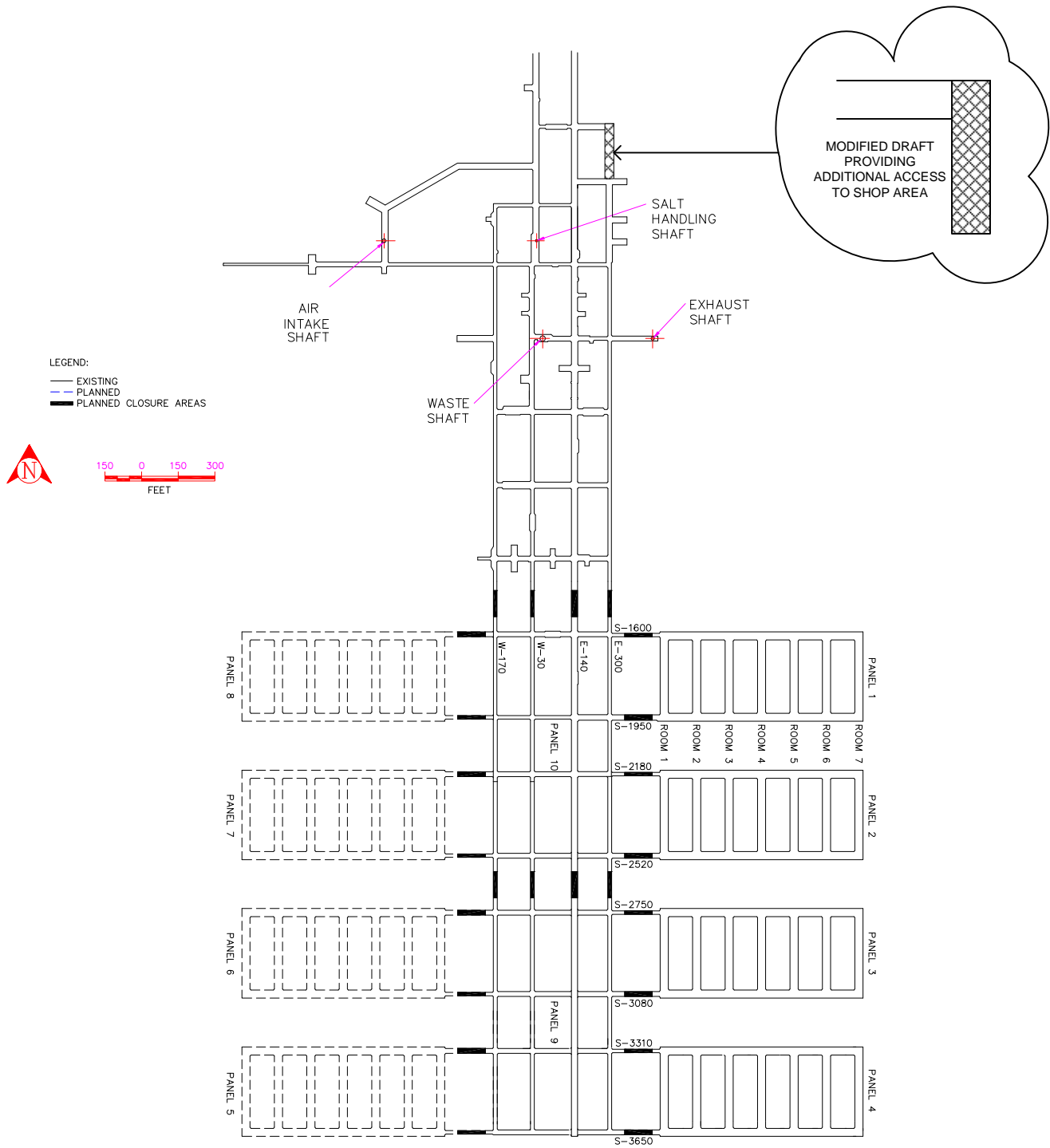


Figure M2-1
Repository Horizon

For informational purposes only – not to be included in Permit

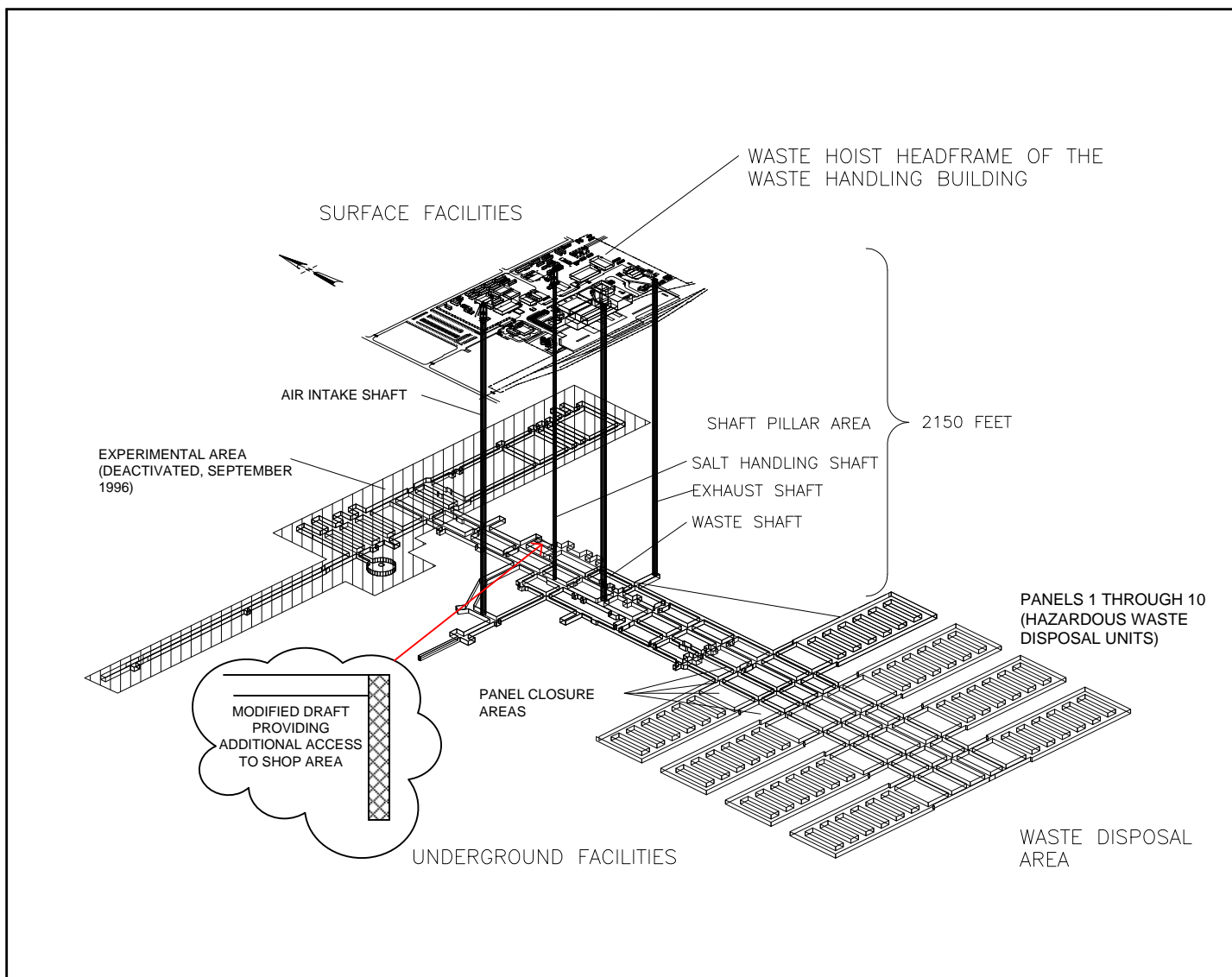
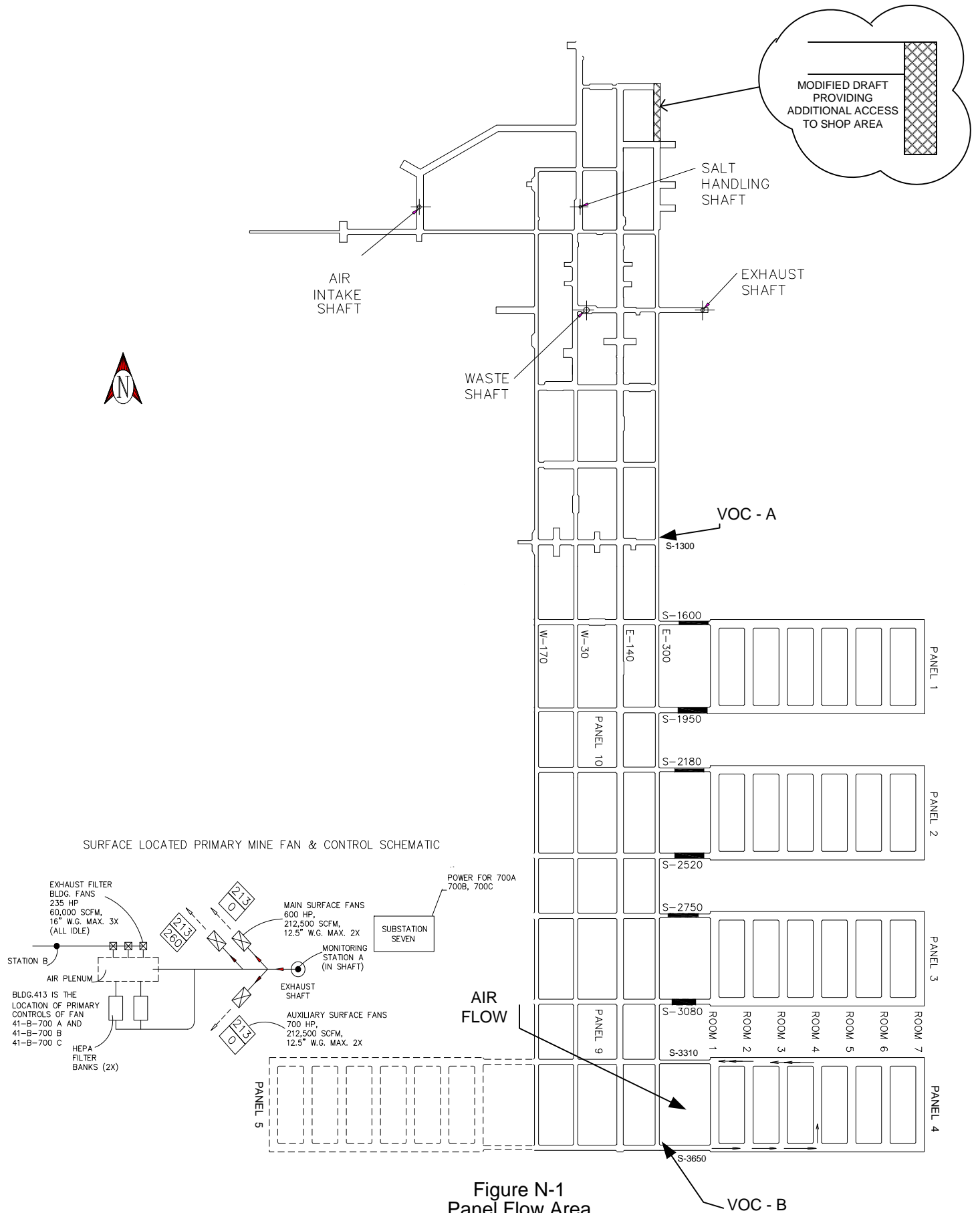


Figure M2-2
Spatial View of the Miscellaneous Unit and Waste Handling Facility

For informational purposes only – not to be included in Permit



For informational purposes only – not to be included in Permit

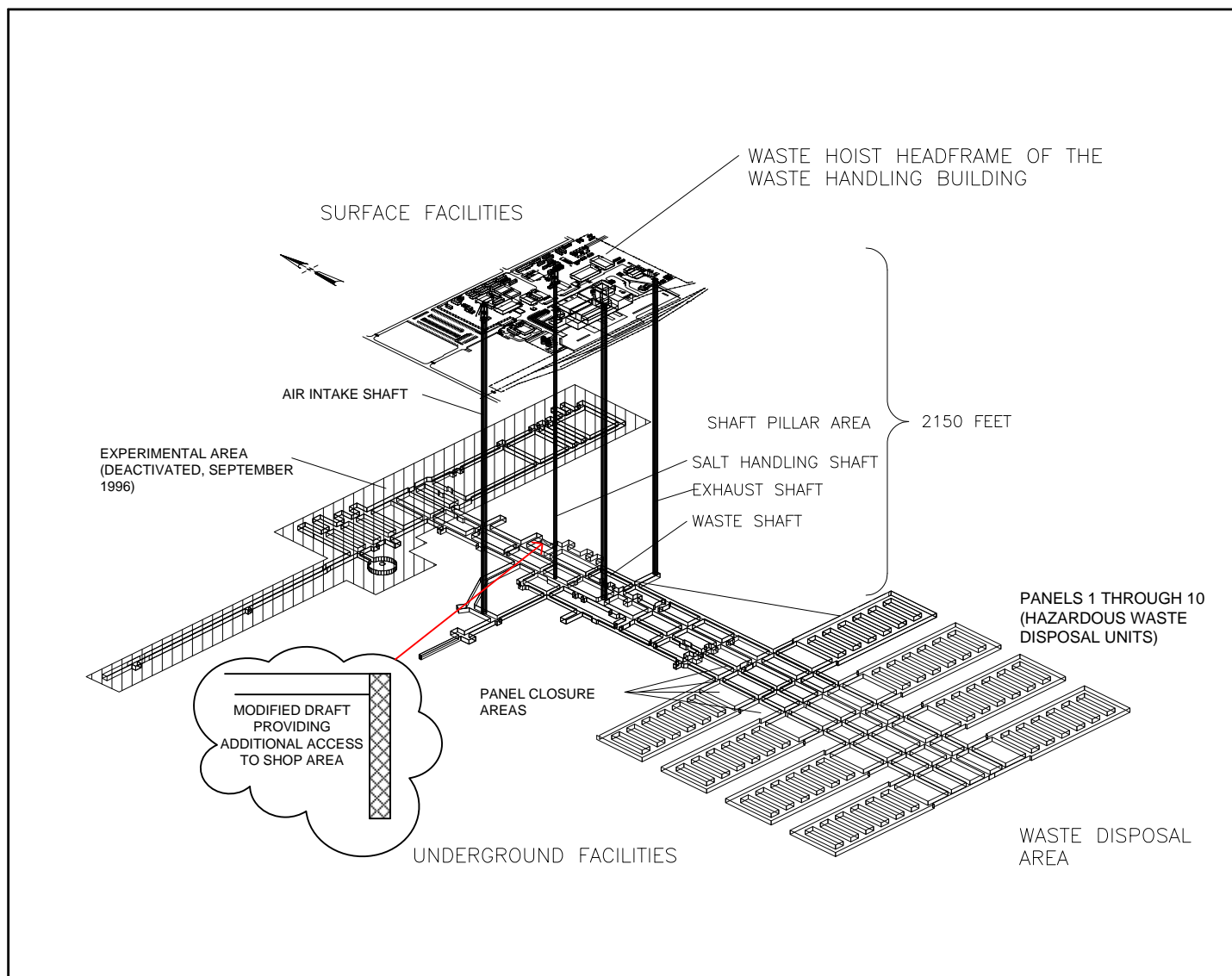


Figure O3-1
Spatial View of the Miscellaneous Unit and Waste Handling Facility

For informational purposes only - not to be included in Permit

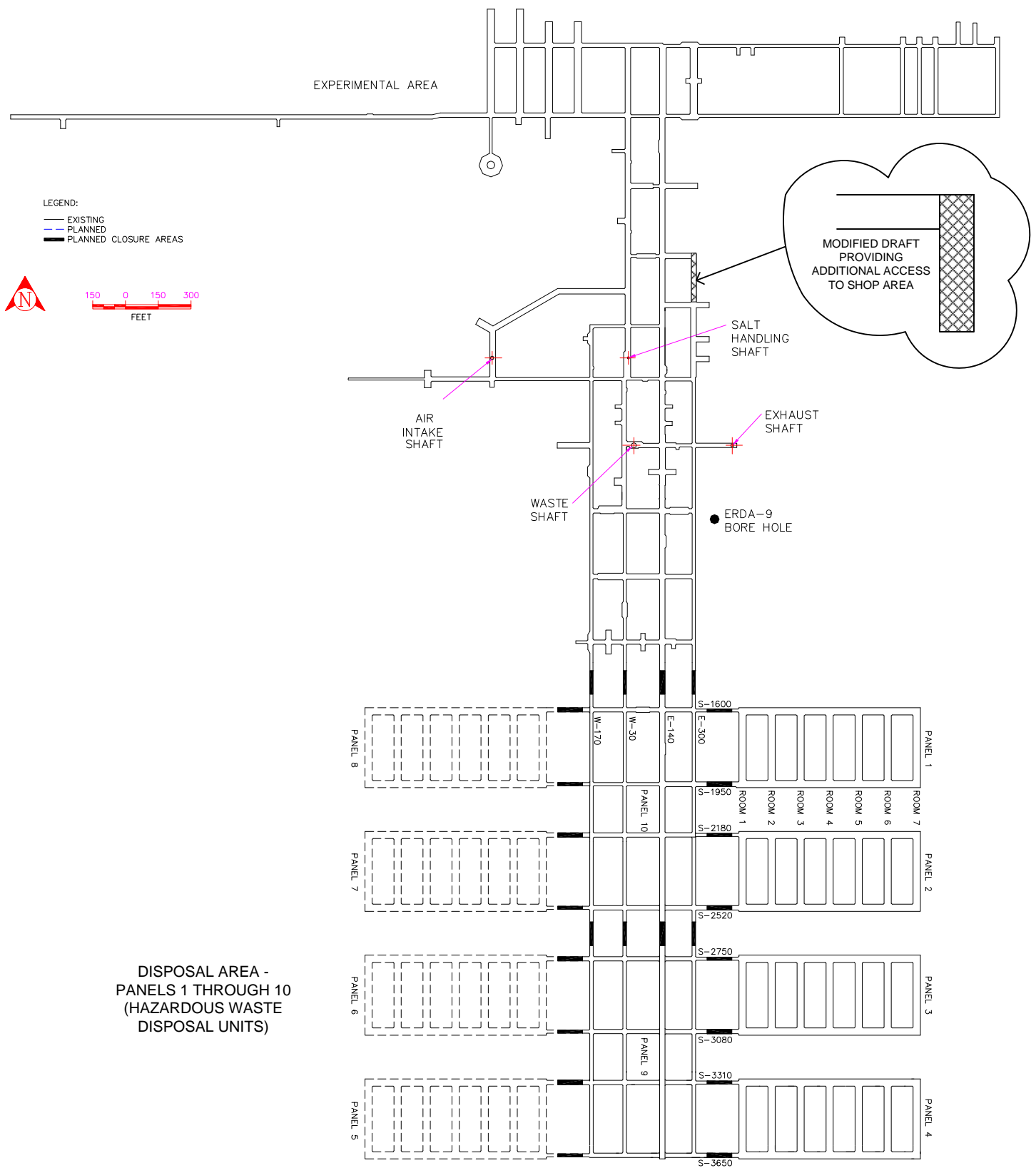


Figure O3-2
Repository Horizon

For informational purposes only – not to be included in Permit

Item 9

Description: Revise the value for cubic feet in Panel 3 final waste volume.

Basis: The change is classified as an "*administrative and informational change*" and is therefore a Class 1 notification pursuant to 20.4.1.900 NMAC (incorporating 40 CFR 270.42, Appendix I, A.1).

Discussion: The conversion of the final waste volume from cubic meters to cubic feet was inadvertently performed using an incorrect conversion factor. This change will correct that value.

Revised Permit Text:

Table IV.A.1 - Underground HWDUs				
Description ¹	Waste Type	Maximum Capacity ²	Container Equivalent	Final Waste Volume
Panel 1	CH TRU	636,000ft ³ (18,000 m ³)		371,000 ft ³ (10,500 m ³)
Panel 2	CH TRU	636,000 ft ³ (18,000 m ³)		634,500 ft ³ (17,998 m ³)
Panel 3	CH TRU	662,150 ft ³ (18,750 m ³)		569,194 <u>603,519</u> ft ³ (17,092 m)
Panel 4	CH TRU	662,150 ft ³ (18,750 m ³)		
	RH TRU	22,950 12,570 ft ³ (356 m ³)	400 RH TRU Canisters	
Panel 5	CH TRU	662,150 ft ³ (18,750 m ³)		
	RH TRU	22,950 15,720 ft ³ (445 m ³)	500 RH TRU Canisters	

Table IV.A.1 - Underground HWDUs				
Description ¹	Waste Type	Maximum Capacity ²	Container Equivalent	Final Waste Volume
Panel 6	CH TRU	662,150 ft ³ (18,750 m ³)		
	RH TRU	22,950 18,860 ft ³ (534 m ³)	600 RH TRU Canisters	
Panel 7	CH TRU	662,150 ft ³ (18,750 m ³)		
	RH TRU	22,950 ft ³ (650 m ³)	730 RH TRU Canisters	
Total	CH TRU	4,582,750 ft³ (129,750 m³)		
	RH TRU	70,100 ft³ (1,985 m³)	2230 RH TRU Canisters	

Item 10

Description: Update the emergency coordinator list.

Basis: The change is classified as a "*change in the name, address or phone number of coordinators...*" and is therefore a Class 1 notification pursuant to 20.4.1.900 NMAC (incorporating 40 CFR 270.42, Appendix I, B.6.d).

Discussion: One individual is being removed as an alternate emergency coordinator and Table F-2 is being updated to indicate that change. No other changes to this table, including personal information, are being made.

Revised Permit Text:

**TABLE F-2
RESOURCE CONSERVATION AND RECOVERY ACT
EMERGENCY COORDINATORS**

Name	Address*	Office Phone	Home Phone*
R. A. (Richard) Marshall (primary) ¹		234-8276 or 234-8695	
R. C. (Russ) Stroble (primary) ¹		234-8276 or 234-8554	
M. L. (Tex) Winans (primary) ¹		234-8276 or 234-8273	
J.E. (Joseph) Bealler ²		234-8276 or 234-8916	
M.G. (Mike) Proctor ²		234-8457	
G. L. (Gary) Kessler ²		234-8326	
A. E. (Alvy) Williams ¹ (primary)		234-8216 or 234-8276	
P.J. (Paul) Paneral ²		234-8498	
M.L. (Mark) Long²		234-8170	

ATTACHMENT B

BLDG./ FAC.#	DESCRIPTION	BLDG./ FAC.#	DESCRIPTION	BLDG./ FAC.#	DESCRIPTION
#241	EQUIPMENT SHED	#384	SALT HANDLING SHAFT HOISTHOUSE	#475	GATEHOUSE
#242	GUARDSHACK	#384A	MINING OPERATIONS	#480	VEHICLE FUEL STATION
#243	SALT HAULING TRUCKS SHELTER	#411	WASTE HANDLING BUILDING	#481	WAREHOUSE ANNEX
#245	TRUPACT TRAILER SHELTER	#412	TRUPACT MAINTENANCE BUILDING	#482	EXHAUST SHAFT HOIST EQUIP. WAREHOUSE
#246	MgO STORAGE SHELTER	#413	EXHAUST SHAFT FILTER BUILDING	#485	SULLAIR COMPRESSOR BUILDING
#253	13.8 KV SWITCHGEAR 25p-SWG15/1	#413A	MONITORING STATION A	#486	ENGINEERING BUILDING
#254.1	AREA SUBSTATION NO. 1 25P-SW15.1	#413B	MONITORING STATION B	#489	TRAINING BUILDING
#254.2	AREA SUBSTATION NO. 2 25P-SW15.2	#414	WATER CHILLER FACILITY & BLDG	#H-16	SANDIA TEST WELL
#254.3	AREA SUBSTATION NO. 3 25P-SW15.3	#451	SUPPORT BUILDING	#917	AIS MONITORING
			SAFETY & EMERGENCY SERVICES		
			FACILITY	#918	VOC TRAILER
#254.4	AREA SUBSTATION NO. 4 25P-SW15.4	#452	WAREHOUSE/SHOPS BUILDING	#918A	VOC AIR MONITORING STATION
#254.5	AREA SUBSTATION NO. 5 25P-SW15.5	#453	AUXILIARY WAREHOUSE BUILDING	#918B	VOC LAB TRAILER
#254.6	AREA SUBSTATION NO. 6 25P-SW15.6	#455	WATER PUMPHOUSE	#950	WORK CONTROL TRAILER
#254.7	AREA SUBSTATION NO. 7 25P-SW15.7	#456	WATER TANK 25-D-001B	#951	PROCUREMENT/PURCHASING
#254.8	AREA SUBSTATION NO. 8 25P-SW15.8	#457N	WATER TANK 25-D-001A	#952	TRAILER
#254.9	480V SWITCHGEAR (25P-SWGO4/9)	#457S	GUARD AND SECURITY BUILDING	#965	SAMPLE LABORATORY TRAILER
#255.1	BACK-UP DIESEL GENERATOR #1 25-PE 503	#458	CORE STORAGE BUILDING	#971	HUMAN RESOURCES TRAILER
#255.2	BACK-UP DIESEL GENERATOR #2 25-PE 504	#459	COMPRESSOR BUILDING	#986	PUBLICATIONS & PROCEDURES TRAILER
#256.4	SWITCHBOARD #4 (25P-SBD04/4)	#463		SWR NO.	
#311	WASTE SHAFT	#465	AUXILIARY AIR INTAKE	6	SWITCHRACK NO. 6
#351	EXHAUST SHAFT	#468	TELEPHONE HUT	SWR NO.	
				7	7A, 7B SWITCHRACK NO. 7, 7A, 7B
#361	AIR INTAKE SHAFT	#473	ARMORY BUILDING	SWR NO.	
				7C	SWITCHRACK NO. 7C
#362	AIR INTAKE SHAFT/HOIST HOUSE	#474	HAZARDOUS WASTE STORAGE FACILITY	SWR NO.	
				10	SWITCHRACK NO. 10
#363	AIR INTAKE SHAFT/WINCH HOUSE	#474A	HAZARDOUS WASTE STORAGE BUILDING	SWR NO.	
	EFFLUENT MONITORING INSTRUMENT			11	SWITCHRACK NO. 11
#364	SHED A	#474B	HAZARDOUS WASTE STORAGE BUILDING	SWR NO.	
	EFFLUENT MONITORING INSTRUMENT			12	SWITCHRACK NO. 12
#365	SHED B	#474C	OIL & GREASE STORAGE BUILDING	SWR NO.	
				15	SWITCHRACK NO. 15
#366	AIR INTAKE SHAFT HEADFRAME	#474D	GAS BOTTLE STORAGE BUILDING		
#371	SALT HANDLING SHAFT	#474E	HAZARD MATERIAL STORAGE BUILDING		
#372	SALT HANDLING SHAFT HEADFRAME	#474F	WASTE OIL RETAINER		

Figure F-1a
Legend to Figure F-1

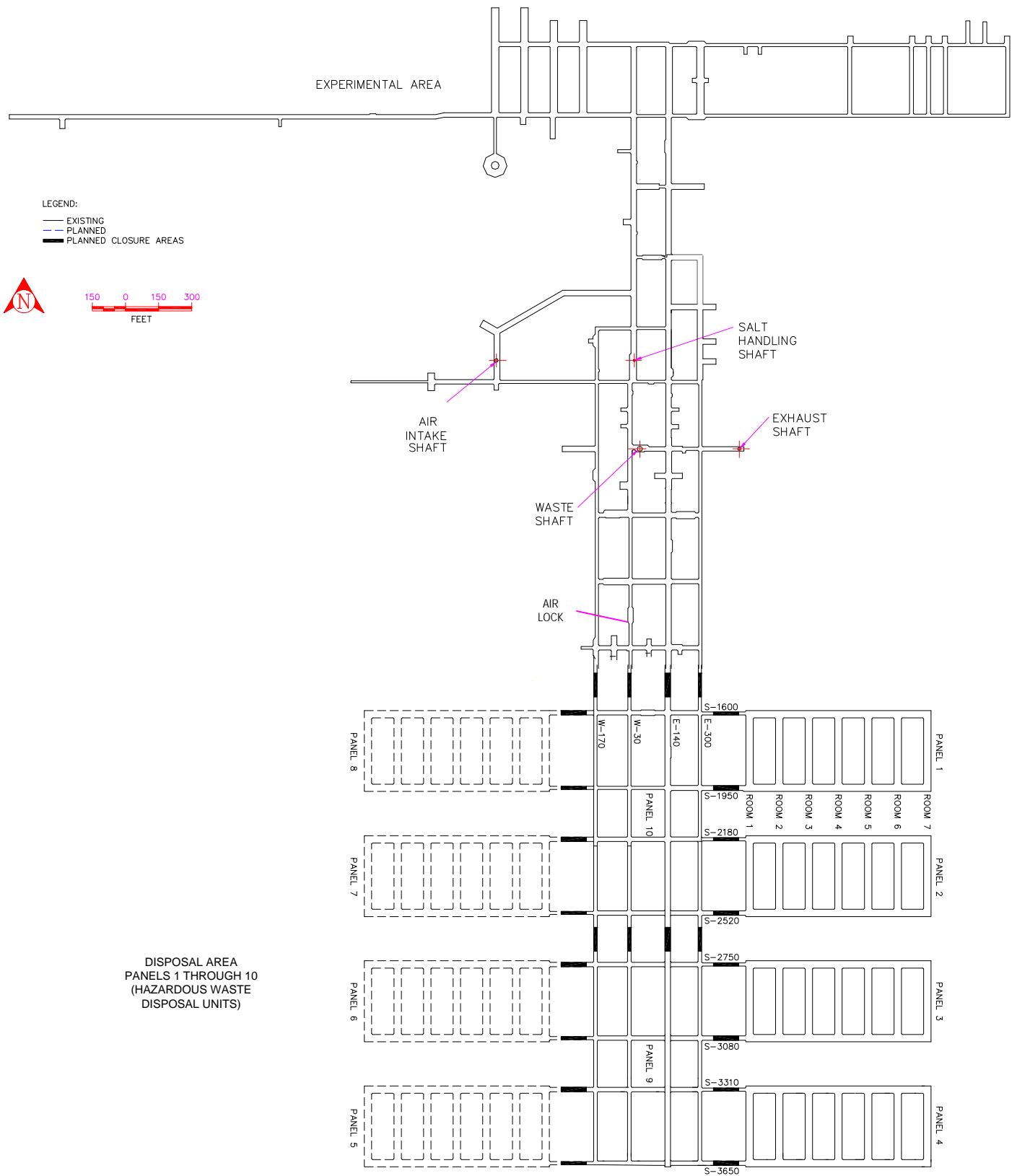


Figure F-3
WIPP Underground Facilities

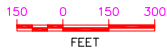
WIPP-19

WIPP-22

EXPERIMENTAL AREA

LEGEND:

- EXISTING
- - - PLANNED
- PLANNED CLOSURE AREAS



BOREHOLE	DEPTH (FT)
ERDA-9	2878
WIPP-19	1038
WIPP-21	1049
WIPP-22	1450
B-25	902
H-1	848
H-2c	795
H-3b1	902
H-16	851
P-3	1576

REPOSITORY DEPTH: 2150 FEET

P-3

WIPP-21

H-16

AIR
INTAKE
SHAFT

B-25

WASTE
SHAFT

SALT
HANDLING
SHAFT

EXHAUST
SHAFT

● ERDA-9
BORE HOLE

H-1

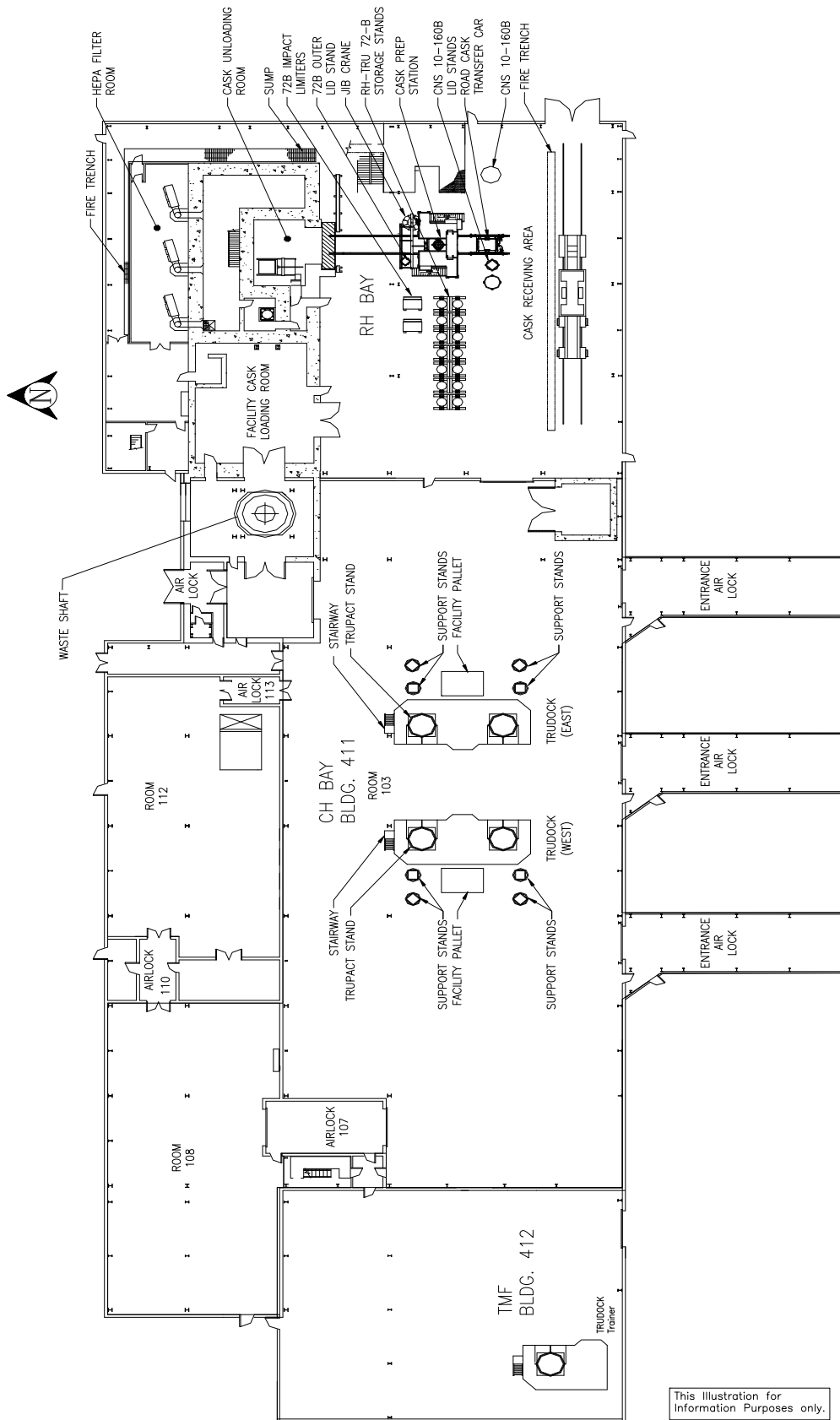
H-2c

DISPOSAL AREA



H-3b1

Figure I-6
Approximate Location of Boreholes in Relation to the WIPP Underground



This illustration for
Information Purposes only.

NTP-03-074
WASTE HANDLING BUILDING

Figure M1-1a
Waste Handling Building Plan (Ground Floor)

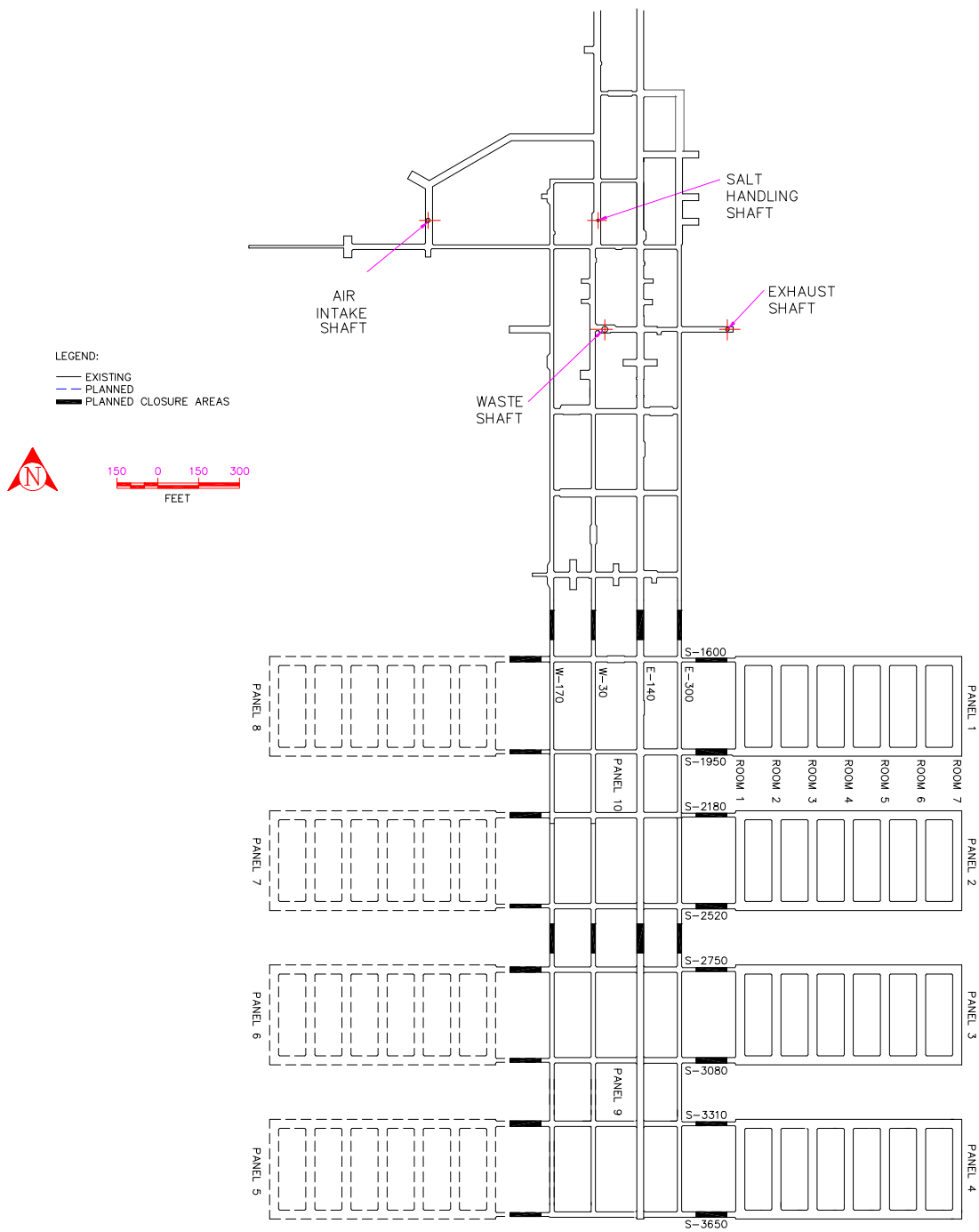


Figure M2-1
Repository Horizon

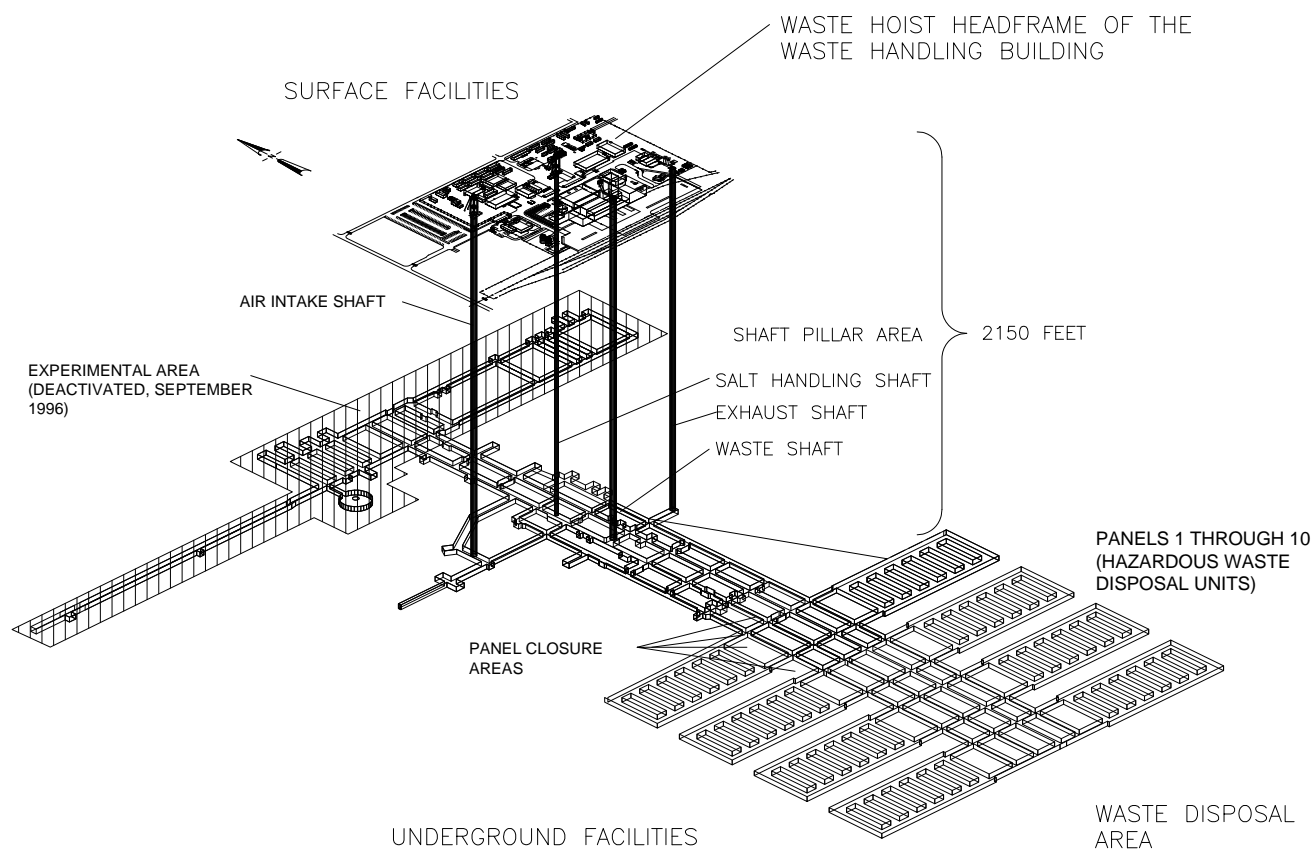


Figure M2-2
Spatial View of the Miscellaneous Unit and Waste Handling Facility

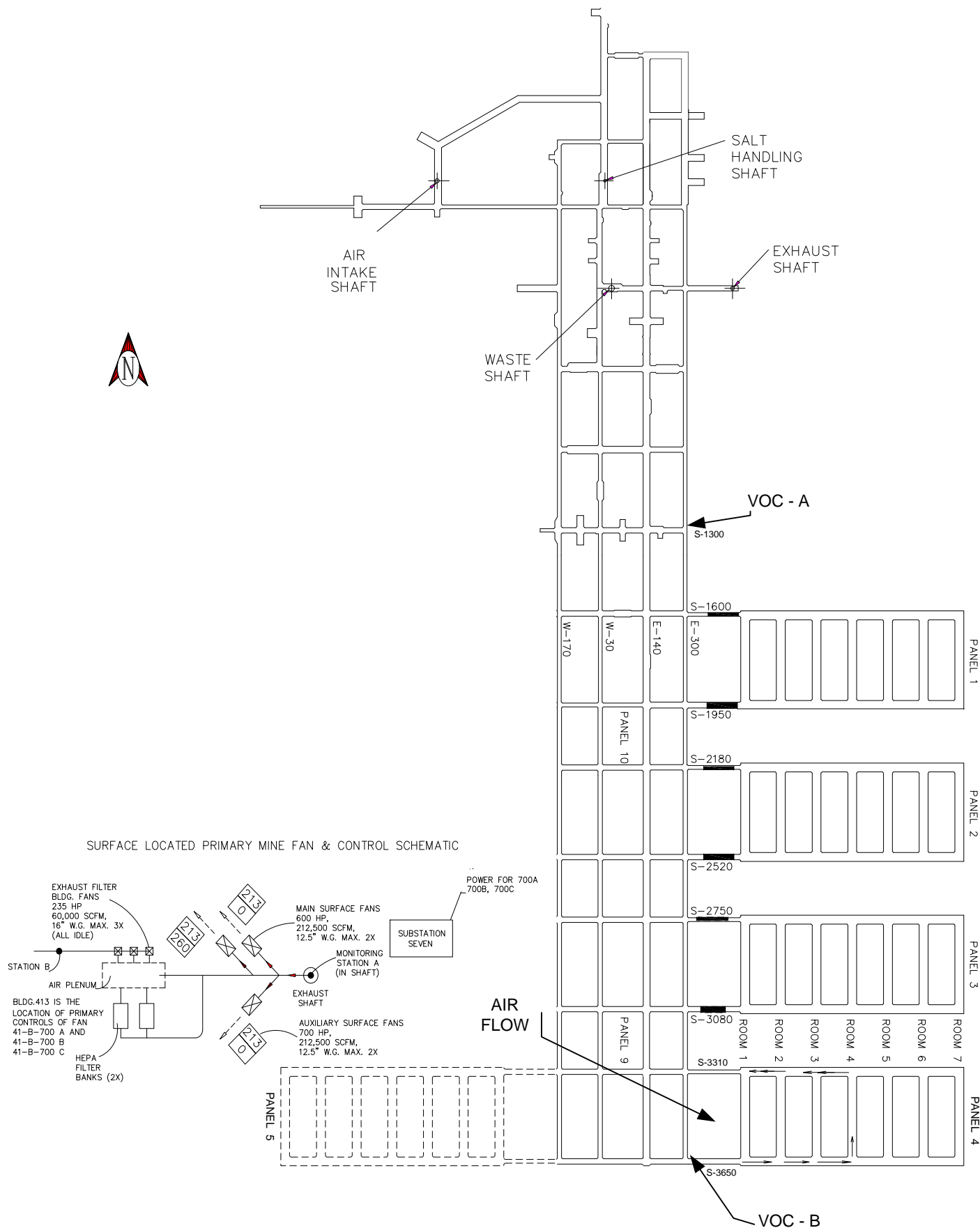


Figure N-1
Panel Flow Area

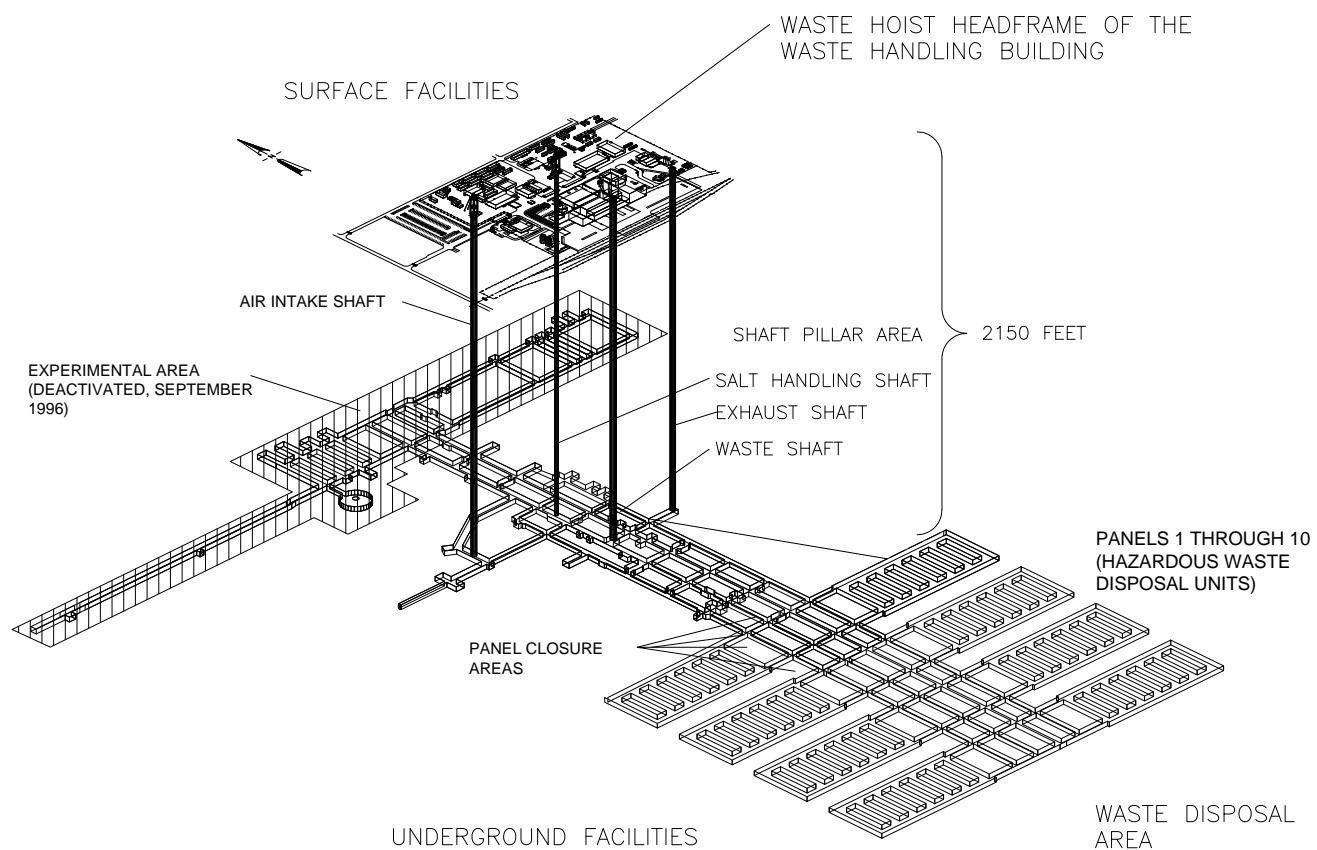


Figure O3-1
Spatial View of the Miscellaneous Unit and Waste Handling Facility

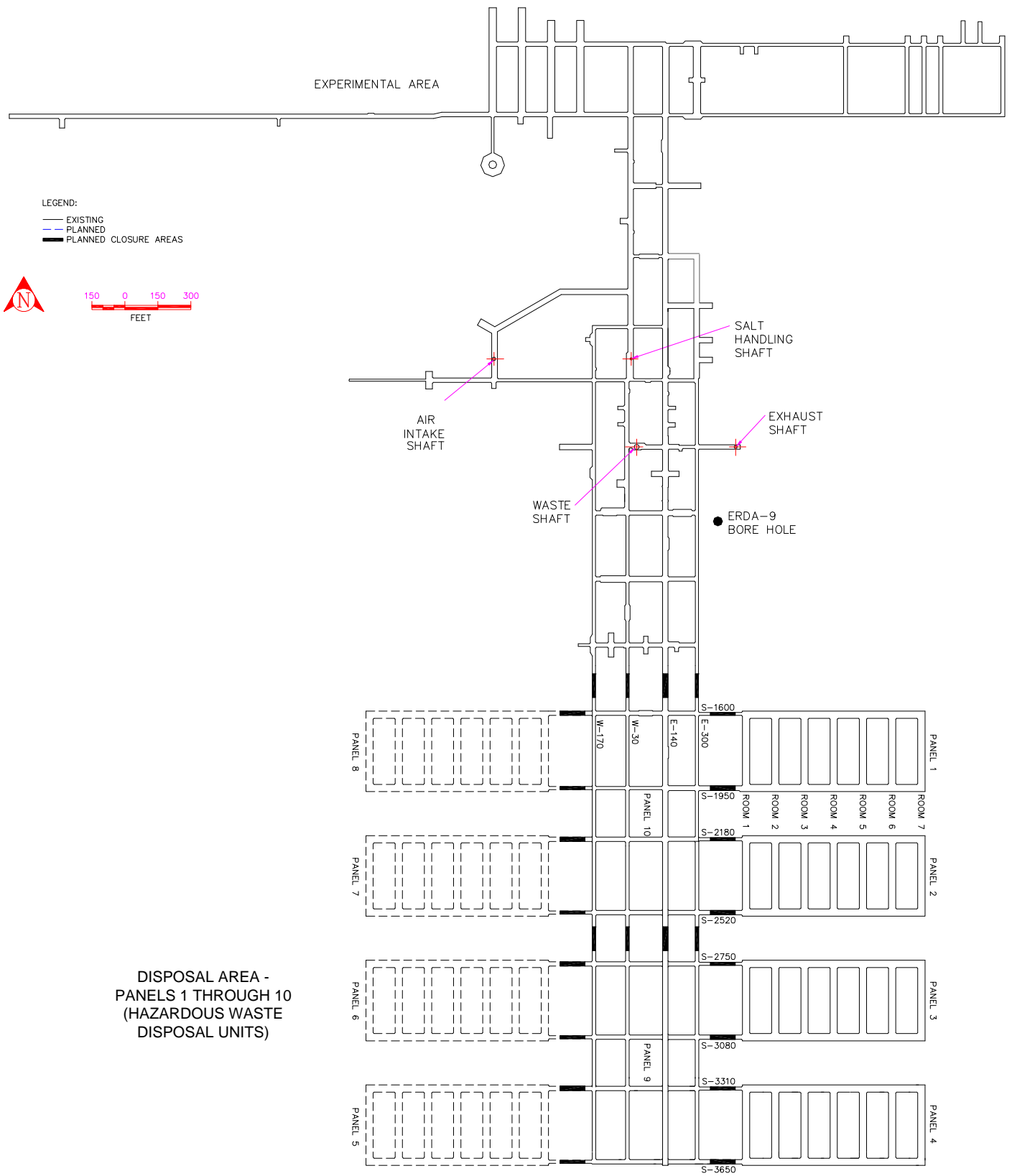


Figure O3-2
Repository Horizon